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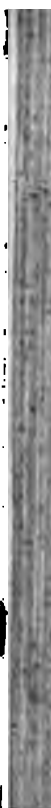




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THE
LONDON
MEDICAL REPOSITORY,
MONTHLY JOURNAL,
AND
REVIEW.

EDITED BY

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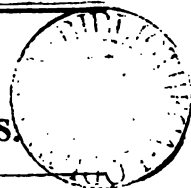
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THE
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PART I.
—
ORIGINAL COMMUNICATIONS.



I.
HISTORICAL SKETCH OF THE PROGRESS OF
MEDICINE,
AND OF THE SCIENCES CONNECTED WITH IT,
During the Year 1822.
BY THE EDITOR.

IN the retrospect of the progress of medical science during the preceding year, which we now proceed to take, we shall confine our attention to objects which present the greatest interest amongst those which offer themselves to our notice.

Amongst these, commencing with GENERAL ANATOMY, there are none which, either in the physiological or pathological relations of the subject, deserve more to be recorded, than the investigations of Mr. C. BELL and Mr. SHAW, respecting the nerves which supply the organs of respiration and those parts of the face and trunk which evince an intimate relation to this important function. The researches of Mr. Bell* on the minute structure of the nerves, both in man and in the lower animals, "proved that those which

* See Philosoph. Trans. for 1821 and 1822; and Mr. Shaw, in the Med. and Phys. Journal for December, 1822, p. 459.

2 Sketch of the Progress of Medicine, &c. by the Editor.

arose from the spinal marrow by double roots were very different in texture from certain other nerves." This circumstance led him to consider that two distinct classes of nerves must exist independently of the sympathetic, the one simple and uniform, the other irregular and complex in proportion to the complexity of the organization. The former he has called *original* or *symmetrical*, the latter *superadded* or *irregular*. In the superadded class of nerves, which are chiefly devoted to the function of respiration, Mr. Bell arranges, 1st. the *par vagum*; 2d. the *portio dura*; 3d. the *spinal accessory*; 4th. the *phrenic*; 5th. the *external respiratory nerves*, &c. "The nerves," this Anatomist states, "on which the associated actions of respiration depend, and which have been proved to belong to this system, by direct experiment, and the induction from anatomy, arise very nearly together. Their origins are not in a bundle, or *fasciculus*, but in a line or series, and from a distinct column of the spinal marrow. Behind the *corpus olivare*, and anterior to that process which descends from the cerebellum, the *corpus retiforme*, a convex slip of medullary matter, may be observed; and this convexity, or *fasciculus*, or *virga*, may be traced down the spinal marrow, betwixt the sulci, which give rise to the anterior and posterior roots of the spinal nerves. This portion of medullary matter is narrow above where the *pons varolii* overhangs it. It expands as it descends; opposite to the lower part of the *corpus olivare* it has reached its utmost convexity, after which it contracts a little, and is continued down the lateral part of the spinal marrow."

From this track of medullary matter on the side of the medulla oblongata, arise in succession from above downwards the *portio dura*, the *glosso-pharyngeus*, the *par vagum*, the *nervus accessorius*, the *phrenic*, and the *external respiratory*. These superadded nerves are comparatively but little sensible; they do not arise by double roots, as the symmetrical do; they have no ganglia on their origins; and while the other voluntary nerves have large, free, and round filaments, they have a close, loose texture, resembling a minute plexus. "These are the nerves which give the appearance of confusion to the dissection, because they cross the others, and go to parts already plentifully supplied from the symmetrical system." After explaining the distribution and connexions of these nerves in a minute manner, and after referring to their ramifications in some of the lower animals, Mr. Bell has drawn some important physiological and pathological inferences, which will come under notice in their appropriate places. We recommend our readers to make themselves acquainted with the original papers of this acute Anatomist which relate to this subject. Many may

be inclined to treat the subject with very unmerited neglect, from the supposition that nothing new remains to be pointed out, either in the conformation or functions of the nervous system. This, however, is a most incorrect opinion; for, we believe that those, who are most in the habit of examining the structure and the phenomena exhibited by this part of the animal organization, will grant that more still remains to be known respecting it than has yet been disclosed to our researches. While we are convinced, from much personal research, that the structure and the operations of the ganglial nerves are entirely different from the voluntary*, we readily admit, from the details which have lately appeared on the subject, as well as from analogical reasoning, that the origins, the distribution, and the minute organization of the latter class of nerves, differ so as to warrant their separation into subordinate orders, according to the functions which each is destined to perform. These investigations of Mr. Bell respecting the functions of the voluntary nerves have tended, as we shall perceive, to throw additional light on a subject which had formerly, and, indeed, lately engaged his attention, we think, in a very successful manner.

The very minute researches of Dr. J. M. MAPPEs, of Frankfort on the Maine, on the intimate structure of the liver, are calculated to throw considerable light on the functions and pathology of this important viscus.† “If water be slowly thrown into the vena portæ,” this Anatomist remarks, “it will force blood and some bile from the hepatic veins; and ultimately it will itself pass out of those vessels. If the liver be now examined, either by dissecting off the peritoneum, or cutting or tearing the liver, two structures will be observed: the one *granulated*, forming convolutions, now resembling those of the intestines, and now branching in other forms; flattened and yet rounded, dense and of a yellow colour, and about a quarter of a line in diameter—the other a *cellulo-vascular structure*, of a brown colour, which fills up the rounded spaces or oblong fissures, of from a quarter to half a line in diameter, which separate the convolutions from each other. These structures are well shown, if water, in which cinnibar has been diffused, be thrown into the hepatic

* See Vol. XVII. p. 369.

† Journal Complémentaire du Dictionnaire de Sciences Médicales, No. 47, Mai, 1822. This article has been so judiciously abridged in a contemporary Journal, the Medical Intelligencer, that we shall save ourselves the trouble of transcription, by giving the greater part of the translation there presented us, adding at the same time, from the original paper, the author's inferences.

veins; for the cinnibar is precipitated on the sides of the vessel, and the water passes by the vena portæ. Between the convolutions are found triangular and somewhat broken openings, which communicate with each other by little chinks. Some of these contain twigs of the hepatic vein; in the others, and especially where the chinks are traced to a great depth, and where the vessels form larger trunks, three vessels are seen together, a large one belonging to the hepatic vein, and two others, of a smaller diameter, belonging to the artery and the hepatic duct.

“ If the hepatic vein be excepted, the other vessels form branches like a tree, as in the rest of the body. The artery, however, gives the most branches; apparently, because they surround, like a capillary net-work, the parietes of the vena portæ, to which purpose they seem to be particularly destined: although some branches penetrate to the surface of the liver, and are distributed on the peritoneum — but without forming a net-work, as in the former case. The ramifications of the hepatic artery and the hepatic duct are always strictly united together; and, in accompanying the larger branches of the vena portæ, they do not intertwine at the two opposite sides of the latter vessel.

“ The large branches of the hepatic duct divide at an acute angle; but the ramifications divide at right, or even obtuse angles. It is these latter short and loose twigs which form the parallel ranges of holes, which are seen by cutting the liver in the direction of a branch. These holes are the orifices of vessels, as is seen by injection or by dissecting the twigs; they cannot, therefore, be confounded with the little dimples which are seen on the internal parietes of the largest hepatic trunks. All the ramifications of the hepatic trunk, indeed, when cut, present a gaping firm opening, like an artery; whilst the cut orifices of the vena portæ, which accompany them, are always in a collapsed state.

“ The duct ramifies something like the vein. The short and thick trunks divide into branches, and form a crowd of smaller and looser twigs, which embrace the grains of the granular substance above described, but apparently without penetrating the substance of them. Hence, these grains are somewhat separated from each other, and they in some degree compress the cellulo-vascular substance, without, however, giving any of their colour to the latter, which is only traversed by some injected vessels.

“ The parietes of the artery, the vena portæ, and the hepatic duct, do not adhere to the substance of the liver; but are separated from it, as may be seen by the microscope, partly by a uniform gelatinous matter, and partly by an

extension of the cellular membrane, which composes the capsule of Glisson. The hepatic vein, on the contrary, adheres intimately to the granulated substance; it also follows, without variation, the latter in its distribution, and the smallest branches penetrate between its granulations. These facts prove the intimate relation which exists between the vein and the granular substance: whilst the artery and vena portæ ramify together in the cellulo-vascular substance, and on the surface of the principal circumvolutions of the granulated substance; and the hepatic duct, the twigs of which are averted from each other, seems to hold a relation with both orders of vessels.

"If a single hepatic vessel be injected, the injection will only pass to the part to which that branch is distributed: on the contrary, water passes rapidly and easily from the vena portæ to the hepatic vein, and vice versâ. Wax, however, rarely passes, and the hepatic duct is never filled either from the vena portæ or hepatic vein."

"From these facts, the author is led to consider the granular substance to be the secreting part of the liver," around which the vessels are grouped as the conducting and preparatory apparatus. The more intimate connexion which this substance holds with the radicles of the hepatic vein has induced M. Mappes to presume that the bile is more probably separated by it, from the blood which had actually arrived within these radicles, than from that which circulates in the extreme ramifications of the vena portæ. This particular substance appears, also, to M. M., to form the basis of all the glands, and to be of a peculiar nature, modified according to the functions which nature has imposed on it. He farther supposes, that in glandular structures there exists an intermediate substance, between the extreme ramifications of both orders of vessels, which holds a more intimate relation with the changes induced in the blood, than the other parts through which it circulates. This substance he conceives to be of a mucous character, and to form the basis of the granular part of the liver and other glands, in which the vessels terminate and commence, and which, he thinks, is entirely appropriated to the particular function and destination which the gland is intended to fulfil. In proof of this he quotes DÖLLINGER, who has adopted a similar opinion. M. Mappes, in an analysis which he offers of EYSENHARDT's investigations respecting the anatomy of the kidney, concludes that the intimate structure of this organ and the liver is in many respects similar.

The inferences which M. BRESCHET has deduced from

6 *Sketch of the Progress of Medicine, &c. by the Editor.*

some dissections of hydrocephalic children * are interesting, and calculated to lead to the investigation of a point which has lately received insufficient attention. The subject to which we allude, is the origin of the olfactory nerves, and, indeed, the extent of the physical functions of the brain itself. As the views of this Anatomist have been already fully stated by us, we can only refer our readers to a former Number respecting them: a similar reason must also justify a reference only to Dr. HORNBER's description † of a muscle connected with the eye, which was lately discovered by him. M. DESMOULIN's anatomical researches on the nervous system of fishes are interesting, and calculated to reflect light on the structure of the higher animals. ‡ A similar remark is applicable to Professor WEBER's inquiries respecting the organ of hearing in those classes in which he has commenced his investigations. || The minute examination which this eminent comparative Anatomist has instituted into the organ of hearing in fishes, is the only part of his inquiry which has yet reached us.

The splendid work of JULES CLOQUET, although calculated to add but little to what is already known in anatomy, is yet entitled to our notice, from the great number and accuracy of the large and beautiful lithographic engravings of which it is chiefly constituted, from being admirably adapted for reference especially amongst those who enjoy not opportunities of frequent dissection, and from being likely to diffuse the knowledge of what has been ascertained in this department of medical science. § Nine *livraisons* of this work have already appeared, containing the first part, or that describing the bones and the ligaments. The chief hold which this undertaking has upon our attention, arises from the circumstance that every figure is copied, by artists well acquainted with anatomy, from the dissections of its distinguished author. The utility of such a production in this country, where frequent or occasional dissections can be practised only with the greatest difficulty, will be apparent to those who have inspected those numbers which are already published.

* See MEDICAL REPOSITORY, No. 107, Vol. XVIII. p. 387.

† Ibid. No. 103, Vol. XVIII. p. 32.

‡ Journal de Physiologie, Octobre, 1822.

|| De Aure et Auditu Hominis et Animalium. Pars I. De Aure Animalium Aquatiliū. Lipsice. 4to. Cum tabulis æneis.

§ Anatomie de l'Homme, ou Description et Figures Lithographiées de toutes les Parties du Corps Humain. Par Jules Cloquet, D.M. &c. &c. Folio.

The work of Professor J. F. MECKEL, of Halle, on comparative anatomy, part of which has appeared within the period allotted to this sketch, is calculated to advance, in a very material manner, this branch of science. The first volume, which is devoted to the consideration of general anatomy, takes an intimate yet extended view of the subject embraced by it. We cannot sufficiently express our obligations to our continental neighbours for the lights which have been mutually reflected by their investigations in human and comparative anatomy. These have not been confined to this science, but have necessarily extended themselves to the functions and diseases of those organs whose organization and structure have chiefly received elucidation. In these departments of medical study we must confess ourselves to have been for a considerable time eclipsed by foreign contemporaries; but the circumstances, to which this temporary superiority was owing, have for some time ceased to exist, and with them has gradually disappeared our inferiority in anatomical and physiological science.

PHYSIOLOGY.—One of the first objects connected with physiology is the consideration of the source not only of the organs themselves, but also of their functions. Such a consideration embraces the interesting but unprofitable doctrine of life and organization. The inquiry of Dr. BARCLAY respecting the opinions entertained on this subject has received a full analysis from us in a preceding Number. This eminent Anatomist is not, however, the only writer who has very lately examined conflicting opinions on this point. Professor VIREY has also done so, and proved himself to be a zealous and ingenious writer in support of the doctrine which believes in the existence of a vital influence distinct from the textures which evince its phenomena. This author, although a much less learned, less logical, and a less energetic reasoner than our countryman, has, nevertheless, brought forward strong evidence in aid of his opinions, derived from the manifestations of the lower animals. This will be found in his excellent and instructive work on the manners and instincts of animals,* in various papers published in contemporary French journals,† and, more fully, in his recent work on the vital influence.‡

* *Histoire des Mœurs et des Instincts des Animaux.* Par J. J. Virey, D.M. 8vo. 2 vols., with 1 vol. of plates. Paris, 1822.

† *Journal Universel des Sciences Médicales.* Fev. 1822, &c. &c.

‡ *De la Puissance Vitale considérée dans ses Fonctions Physiologiques chez l'Homme et tous Etres Organisés,* &c. &c. Par J. J. Virey, D.M. &c. &c. Paris, 1822. 8vo.

§ *Sketch of the Progress of Medicine, &c. by the Editor.*

Mr. HERBERT MAYO has also offered some observations on a vital principle, in which he thinks its separate existence has not been proved; and, while he is of opinion that mind and matter are logically distinct, he considers that no change whatever takes place in the functions of the mind, without a correspondent change in some part or in the whole of the nervous system.* Those who are interested in this discussion, will find some ingenious speculations connected with it in a contemporary journal.†

Amongst the particular functions of organs which have lately engaged the attention of philosophers, none deserve a more particular account than those which have received elucidation from the researches of Mr. BELL, M. MAGENDIE, and Mr. SHAW. A considerable number of years ago, Mr. Bell's attention was attracted by "the difference in the distribution of the nerves of the head from those of the body, and the remarkable fact that all the spinal nerves arose by double roots, viz. one from the anterior, and another from the posterior column of the spinal marrow. Observing that this form of origin was the same in all animals possessing a spinal cord, and finding that the observations he had made on the anatomy of the brain in the lower animals corresponded with those of the most distinguished Anatomists,—namely, that the anterior column of the spinal marrow was continuous with the crura of the cerebrum, and the posterior with the crura of the cerebellum,—he conceived that, by experiments on the roots of these nerves, he might discover the functions of the two columns, and, perhaps, through them, arrive at a more accurate knowledge of the relations and individual uses of the cerebrum and cerebellum." Previously, however, to having made these experiments, Mr. Bell entertained the opinion that the anterior column of the spinal cord was different in function from the posterior; and that, through it, the simple voluntary power of moving particular parts was conveyed. He deduced this from observing, that the two nerves, which are generally supposed to be purely motors, arose from the anterior fasciculus. The experiments which these opinions suggested were made; and although they were not conclusive, yet they encouraged the view he had taken, and gave results in some degree similar to those which Magendie obtained from his experiments, which were related in our Number for October. Further and still more interesting experiments have been performed by this latter

* Anatomical and Physiological Commentaries. By H. Mayo, Surgeon, &c. No. 1. August, 1822.

† Journal of Foreign Medicine, No. 14, p. 255.

physiologist, which will be detailed in another part of this Number, and which fully confirm the ideas which Mr. Bell had previously adopted respecting the functions of the brain and cerebellum. Such were his reasons "for concluding that the cerebrum and cerebellum were parts distinct in function, and that every nerve possessing a double function obtained that by having a double root. He now saw the meaning of the double connexion of the nerves with the spinal marrow; and also the cause of that seeming intricacy in the connexion of nerves throughout their course, which were not double at their origins."* The investigation of this subject, which appears to have engaged Mr. Bell's attention in the manner now detailed, and which has very lately been so successfully carried on by M. Magendie, appears to have led Mr. B. to a collateral object, — one to which he subsequently directed his attention with greater assiduity.

Having drawn the inference that "the spinal nerves being double, and having their roots in the spinal marrow, of which a portion comes from the cerebrum and a portion from the cerebellum, they convey the attributes of both grand divisions of the brain to every part; and therefore the distribution of such nerves is simple, one nerve supplying its destined part;" Mr. Bell appears next to have endeavoured to establish and illustrate the following propositions; — that "the nerves which come directly from the brain, come from parts of the brain which vary in operation; and, in order to bestow different qualities on the parts to which the nerves are distributed, two or more nerves must be united in their course, or at their final destination.

"Such nerves as are single in their origin from the spinal marrow will be found either to unite in their course with some other nerves, or to be such as are acknowledged to be peculiar in their operation."

The examination of these points appears to have led Mr. Bell to the researches on the respiratory class of nerves whose origin has been just described, and which has been called by him the superadded class. "It was not, however, until three years ago, that Mr. Bell found himself entitled to offer the conjecture, that several nerves, which had hitherto been supposed to be of the same character," were not only different in structure and origin, but also in function. He appears to have adopted this opinion from inquiries into the comparative anatomy of the nervous system. "The same mode of research also induced him to suspect, that the intricacy of the nerves of the head and trunk, when compared with

* *Medical and Physical Journal*, December, 1822, p. 458.
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those of the limbs, depended in a great measure on the particular form of the respiratory organs, and on their combination with the different functions of the throat, heart, and stomach. It became now interesting to discover how far these views deduced from anatomy would be substantiated by experiments." It had already been shown, that the results of cutting the fibrils of the spinal nerves which arise from the posterior column of the spinal marrow, were very different from those observed when the fibrils connected with the anterior column were divided. Two nerves which lay nearly in the same situation, and supplied the same parts, but the origins of which were from different portions of the brain, were then looked for; and the fifth and portio dura were fixed upon. The consequences of cutting the one nerve were so different from those following the division of the other, that there now remained no question of the general correctness of the theory. Having ascertained these points, it became requisite to determine the nature and extent of the functions belonging to each order of these nerves.

The nerves of the spine, the tenth or sub-occipital nerve, and the fifth pair, constitute the original and symmetrical system. "All these nerves agree in these essential circumstances; they have all double origins; they have all ganglia on one of their roots; they go out laterally to certain divisions of the body; they do not interfere to unite the divisions of the frame; they are all muscular nerves, ordering the voluntary motions of the frame; they are all exquisitely sensible; and the source of the common sensibility of the surface of the body;" they are seen to pervade every part; and yet they are symmetrical and simple as the nerves of the lower animals. "These are also the nerves which are affected in the common cases of hemiplegia; and when, in experiments on animals, or in operations on the human body, the trunk of one of these nerves is divided, the muscles to which it goes are deprived of the power of executing certain motions; and the sensibility of the part of the skin to which the nerve is distributed is also destroyed. But if only one of the origins be divided (the anterior), the power over the motions of the muscle will alone be destroyed, while the sensibility of the part will continue perfect; but this will also be destroyed if the other origin (the posterior) be divided."*

On the other hand, the respiratory nerves present other phenomena;—they have single origins, possess little sensibility, and arise from the situation already noticed. 1st. The portio dura of the seventh pair "produces all those motions

* *Med. and Phys. Journal*, Vol. XLVIII, p. 463.

of the nostrils, lips, or face generally, which accord with the motions of the chest in respiration. When cut, the face is deprived of its consent with the lungs, and all *expression of emotion*. 2d. The par vagum associates the larynx, the lungs, the heart, and the stomach, with the muscular apparatus of respiration. 3d. The spinal accessory controls and directs the operations of the muscles of the neck and shoulder, in the offices of respiration. 4th. The phrenic nerve has its functions sufficiently characterized in the name of internal respiratory, which Mr. Bell has assigned it. 5th. The glosso-pharyngeal nerve, &c. and, 6th. the external respiratory nerve, perform the functions which those parts, to which they are distributed, have in connexion with the operations of respiration."*

* In Mr. Bell's second paper we find the following observations :—
 " Instead of one respiratory nerve, the *par vagum*, the nerve so called, is found to be the central one of a system of nerves of great extent. Instead of the relations of the vital organs of circulation and respiration depending on some supposed influence of the sympathetic nerve, they are found to have an appropriate system." In other parts, Mr. B. remarks on the confusion which has arisen in physiology and pathology from the circumstance, that the par vagum has been classed with the sympathetic or ganglial nerves. The general justness of these observations we are quite disposed to admit. But if Mr. Bell will honour us with a perusal of a paper in which some of the associated phenomena are treated of, which the stomach and respiratory organs evince, he will find a marked exception. It has, we believe, been well known to many of our friends, that for several years past we have employed some portion of our time in investigating the nervous system, more particularly the ganglial or organic class of nerves. Our dissections and experiments had long since taught us that the par vagum could neither be arranged with the voluntary, nor with the involuntary nerves. In irrefragable proof of this assertion, we refer Mr. Bell to a paper which was read before the Medical Society at the commencement of 1821, and which was published in the Medical and Physical Journal for *May of that year*, many months before we even knew that Mr. Bell entertained any novel opinions respecting the nervous system, and before his first paper on the subject was read before the Royal Society. We quote a passage from our paper at page 366, of Vol. XLV. of the Journal referred to, where the process of rumination is explained :—

" It cannot be supposed improbable that the irritation produced in this part of the stomach by the unchanged aliments in ruminating individuals should excite the animal sensibility of this organ ; and if the brain be in a state capable of receiving the sensation, it is propagated to the organs of respiration, and their action induced through the medium of the same set of nerves, — namely, the *par vagum*, — that forms not only the *respiratory class*, but also the connecting

It will be impossible for us, at present, to sketch, at greater length, Mr. BELL's views respecting this class of nerves, as a more legitimate opportunity will offer itself of delineating them more fully. It would, however, be injustice to an ingenious Anatomist, Mr. MAYO,* to overlook altogether his inquiries on this subject; but they will be also embraced in a future review.

The papers of Dr. PHILIP, in the Quarterly Journal of Science,† although presenting us with nothing beyond what has been formerly advanced respecting the nervous system, are still valuable, as they convey a succinct account of his opinions, deduced chiefly from his former investigations, and applied to the general principles of physiology. One important point, respecting the transmission of the nervous influence, which has lately been ascertained by Dr. Philip, deserves to be noticed in this place. This physiologist states, with reference to the section of the par vagum, "that it is necessary, after the division of the nerves, to displace one of the divided ends, in order wholly to arrest the function of the secreting surface; the influence of the brain still passing in such a quantity, if this be not done, as to bestow on that surface a considerable degree of the secreting power; and that even when the divided ends, if not otherwise displaced, are separated to a distance of a quarter of an inch."

The effects of the section of the pneumo-gastric nerve have also engaged the attention of MM. BÉCLARD and DUPUY. The results of their experiments were lately communicated to the Royal Academy of Medicine of Paris, and a summary of their conclusions inserted in a former Number of this Journal.‡ The treatise on acephalous fœtuses, published by BRÉSCHE in the first volume of the Dictionnaire de Médecine, will be read with interest by all who value literary, as well as pathological research, in the study of medicine. The valuable and well digested facts which he has there detailed, are well calculated to advance our knowledge respecting the extent of function which ought to be imputed to the encephalon and spinal cord. A brief account of the classification which this learned Anatomist adopted will be found in our seventeenth volume.

Nearly allied to the consideration of the absence or of the

chain between the ganglial and voluntary orders of the grand nervous system; and while it bestows sensibility on the pulmonary system, it likewise gives a requisite, but sparing, share of its influence to the stomach."

* Anatomical and Physiological Commentaries, No. 1, &c. p. 107.

† Nos. 25, 26, and 27.

‡ For December, 1822, p. 536.

perfect existence of the cerebral masses, are the opinions which relate to the nature and extent of the functions which they perform. Dr. PRICHARD's work on the nervous system offered some ingenious observations connected with these subjects, which came under examination in a previous Number. No doctrine, however, is more intimately related, in its fundamental points, to the consideration of the functions of the brain, than the one now so generally termed phrenology. More than one essay has appeared in support of its general principles. Of these, none is more calculated, at first sight, to excite attention, and less qualified to reward it, than the one by Mr. ABERNETHY. In considering this production more calculated to promote than to discountenance the adoption of the opinions in question, we perhaps draw a wrong inference; but the author coquettes in such a manner with his subject, and views it with such a spirit of indecision, as to leave us in doubt of his sincerity.

Dr. BELL, of Philadelphia,* has become the apostle of phrenology in America, with all the zeal of a recent convert. His paper on this subject evinces considerable ingenuity and research in support of the doctrine; but his reasoning is founded on unsound data, and his arguments are too frequently derived from loose analogy. Amongst the papers which have appeared in opposition to these views, either amongst ourselves or on the continent, none is really so formidable, from the keenness of its satire, the acuteness of its criticism, and the force of its arguments, as that lately published by Mr. BOND.†

To the readers of this Journal, our own views respecting the functions of the nervous system may have become somewhat familiar; more especially as they regard that part of it which supplies the vascular systems and the secreting organs. To this class of nerves, the ganglial, we have attributed the whole circle of vital phenomena which the heart, blood-vessels, absorbents, secreting viscera and surfaces, with the circulating fluids, present,—including animal heat, secretion, nutrition, growth, irritability, and, in short, all the involuntary and insensible actions which go on in the frame. For a classified outline of these inferences, we must refer to a former Number of the REPOSITORY;‡ where also will be found their application to pathology and therapeutics.

Passing from the nervous to the vascular system, we find but little added to our knowledge, beyond what had been

* Chapman's Philadelphia Journal for May, 1822, p. 72.

† See REPOSITORY, Vol. XVII. p. 282.

‡ Ibid. for May, 1822, p. 369.

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advanced by former physiologists. MM. PREVOST and DUMAS have been engaged in a number of interesting microscopic observations and experiments on the nature of the globules of the blood, and on the transfusion of this fluid. An account of the result of these was given on a former occasion, to which we now refer.* The late observations of Dr. KNOX relative to the action of the heart in fishes† are interesting, and not the less so as they respect a subject on which physiologists are by no means agreed, and which requires, to its elucidation, farther investigation through various orders of animals. The observations of Dr. PHILIP on this subject will be considered important. This physiologist is of opinion, that the action of this organ is independent of the nervous system, although its functions are influenced through it; and he declares himself a supporter of the doctrine which espouses the vitality of the blood, and the separate and independent existence of the principle of irritability in muscular fibres.‡

We offered some observations on the moving powers of the heart and vascular systems in some preceding Numbers of this Journal,|| to which we will now only allude; and on a former occasion we have stated, that all the vital phenomena presented by the circulating fluids result from the influence of the ganglial class of nerves, which are distributed chiefly to the interior coats of the vessels, and which extend to the ultimate vascular ramifications.

Nothing, we believe, has been added to our knowledge respecting the nature of the absorbent system during the preceding year, beyond what had excited the attention of physiologists at a period not much more remote. We stated, at pages 160 and 254 of our seventeenth volume, all that has been ascertained respecting the distribution and connexions of the absorbents. The functions which resulted from the arrangement there noticed became a matter of easy inference. Several experiments, undertaken with a view farther to determine and to elucidate these matters, both in their relation to pathology and physiology, have been detailed to us by foreign inquirers. Some of these have been laid before our readers,§ in that full manner which their importance, in a pathological point of view, deserve. Our Trans-

* No. 99, Vol. XVII. of the REPOSITORY, p. 260.

† Edinburgh Medical Journal, No. 73, p. 564.

‡ See General Principles of Physiology, in the Journal of Science, No. 25.

|| For September and November, 1822.

§ No. 102, Vol. XVII. p. 309.

atlantic brethren have also entered upon the inquiry with a zeal calculated to advance still farther the rapidly rising state of medical science amongst them.* A summary of their observations will occupy our attention on an early occasion. To those who are desirous of obtaining the fullest information respecting absorption, we recommend the treatise by M. ADELON, in the *Dictionnaire de Médecine*; which is the latest, and, in our opinion, the best article which has appeared on the subject.

The functions of particular viscera have, in a few instances only, engaged the inquiries of physiologists during the period to which this sketch relates. The operations of the liver have been examined by Dr. STEARNS of New-York;† but we do not perceive that they have received any additional elucidation from his researches. The observations of Mr. HODSKIN on the uses of the spleen,‡ although brought forward with the air and circumstance of a new discovery, present nothing actually novel, unless what was always admitted to be one of its functions by well-informed physiologists, namely, the accumulation of blood which it admits, by reason of its peculiar texture, whenever the system is under the operation of certain causes and states of disease, shall be considered by some to be a discovery. This function, which is only one of others which we consider this organ to perform, Mr. Hodskin believes to be its chief use in the animal economy; and he conceives that it acts in this way with so much readiness and celerity, as to completely fulfil the office of a safety pipe to the whole frame.

Several treatises have been published, during the year 1822, on the general principles of physiology. Of these, "The Institutions of Human Physiology," by LENHOSSÉK,|| is the most complete. Some of the views of this writer are fully and clearly stated; but we do not find that he has added any thing to the science. The fundamental principle, to which he ultimately refers the various operations which characterize the animal textures, is considered by him, as it has been by SPRENGEL, PROCHASKA, PHILIP, and others, to be a galvanic influence. The chief advantages which this work offers are the full and well arranged manner in which the subjects are discussed, and the extended view he has taken

* See CHAPMAN'S Philadelphia Journal for February and August, 1822.

† CHAPMAN'S Journal, No. 8, p. 230.

‡ Edinburgh Medical Journal, No. 70, p. 82.

|| *Institutiones Physiologiæ Humanæ; Usui Academico accommodatæ.* Auctore Mich. Lenhossék, M.D. 2 vol. 8vo. Viennæ, 1822.

of the mutual relations of the animal functions. The work is, in many respects, well calculated for the use of the author's pupils at the university of Vienna, where he is assistant professor of physiology.

Two productions have appeared in our own country on this branch of study, neither of which are so full in their details as to constitute complete treatises on the subject. The more extended of these, by Dr. HOOD,* and the observations of Dr. PHILIP on the general principles of the science, are reserved for analysis; we therefore will not anticipate any remark which we shall have to make on that occasion. The work of BROUSSAIS, on Physiology as applied to Pathology, has only in part appeared. This writer has entered upon this undertaking with the avowed intention of placing his pathological and practical doctrines on the basis of inductive reasoning. As soon as his opinions shall have been fully detailed, we will submit them to strict examination.

PATHOLOGY. — Commencing our view of the progress of this branch of medical science with an account of the facts which have been ascertained respecting the derangements of the nervous system, the first object that attracts our attention is the important information which we have derived respecting apoplexy of the cerebellum, and inflammation of that organ. For this we are entirely indebted to M. SERRES and Mr. DUNGLISON.† The observations of these pathologists possess the utmost interest, as they not only throw light on the class of functions which belong to this part of the nervous system, but point also, in a very remarkable manner, to the remote causes of its principal lesions, and discover the chief means of distinguishing these from the disorders to which other parts of this system are liable.

The excellent works of Drs. LALLEMAND, PARENT-DUCHATELET, and MARTINET, on the more general subject, the pathology of the encephalon and its membranes, appeared previously to the period embraced by this essay. Upon this subject we have, however, the first part of a paper by Dr. CRAIGIE,‡ which contains a well-digested account of the derangements which are met with after death, in the important organ whose disorders now claim our attention. The materials of this memoir seem to have been derived chiefly from his own experience, and from that of some of the best and most correct observers amongst ourselves and on the continent. Dr. C. divides this

* Analytic Physiology; by Samuel Hood, M.D. 1822.

† See *Journal de Physiologie*, Tom. II.; and *MEDICAL REPOSITORY* for September and October, 1822.

‡ *Edinburgh Medical Journal*, October, 1822.

subject into two general divisions: I. The morbid changes of the brain and its appendages; II. The connexion between these changes, and others which exist in different organs. The former of these divisions he examines under the subdivisions of—"1st. Morbid changes in the membranes; 2d. Morbid changes in the convoluted surface; 3d. Morbid changes in the central surface; 4th. Morbid changes in the substance of the encephalic mass."

With respect to the changes in the membranes, Dr. C. considers, that firm adhesion of the dura mater to the internal cranial surface can never amount to disease; while, on the contrary, he is inclined to think, that the most frequent and ordinary effect of disease is to make it adhere with less firmness. In proof of this opinion, he details a case of epilepsy, in which the latter state was particularly remarkable. On the subject of the existence of hard tumours in the dura mater, and of osseous degenerations of the falx, &c. he offers no remarks. Without entering into any disquisition respecting the nature of the connexion which exists between the non-adherent surface of this membrane and of the arachnoid to which it is applied, he concludes that the resemblance is close, and that it is often the seat of similar morbid actions. He thinks that it might be preferable, in the present state of our knowledge, to consider the arachnoid as a membrane of a peculiar nature; and believes that its derangements depend, in the majority of instances, on disorders in a different membrane, or in the encephalic mass. On this account, he considers it to be exceedingly difficult to separate the pathological states of the arachnoid from those of the pia mater, or even of some other parts of the brain, "either in practical observation, or in nosographical arrangement." The most usual morbid alteration to which the arachnoid is liable, is the diminution of its transparency, without any change in its shining aspect. The superior part of the hemispheres is frequently occupied with this appearance; but it is most conspicuous at the basis of the brain. "In such circumstances this membrane is elevated and detached from the pia mater by the interposition of a watery fluid." After inquiring whether this secretion arises from the surface of the pia mater or from the opposite one of the arachnoid, Dr. Craigie concludes that it takes place from the former, because it is situated on a different side of the arachnoid to that from which all serous membranes effuse their fluids.

Dr. C. next states, that this effusion has been improperly taken for acute hydrocephalus, that it frequently is present in the last stage of fever, and is even met with on dissection,

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when it was indicated by no symptom during life. In proof of its resulting, in the last description of cases, from the process of transudation after death, he adduces some interesting observations from the work of the WENZELS. With regard to the quantity of the fluid effused in the course of disease, he offers the remark which has been often made, namely, that any effusion, or any morbid change, which takes place in a short time, and occasions a sudden compression of the brain, produces death very rapidly, whereas any change which comes on slowly seldom proves suddenly fatal. Connected with this subject, we have the excellent dissections and remarks of Professor JEFFRAY* on chronic hydrocephalus, which illustrate this position, and indeed several other points connected with chronic effusion on the brain, in a very interesting manner.

Dr. Craigie next takes notice of the progressive attenuation, perforation, and rupture of the septum lucidum, in consequence of the elevation of the corpus callosum from the fornix by the fluid effused within the ventricles. The stretched septum becomes gradually thinner, and even translucent; and the capillary threads of cerebral substance of which it is composed, are separated so as to give it the appearance of a small piece of network. As effusion advances, the interlacement of cerebral threads is ruptured, and a hole of an elliptical form is produced, by which the two lateral divisions of the central surface, called the ventricles, communicate directly and freely. Dr. C. very justly doubts whether the arachnoid ever secretes purulent matter, unless it be after wounds of the head or fractures of the cranium. Coagulable lymph is, however, often found between it and the pia mater, which, when cursorily observed through the former membrane, has the appearance of pus, and has consequently been taken for that secretion by superficial observers. Dr. C. concludes the pathology of the arachnoid with stating, that he has usually found it perfectly dry, and therefore of a dull appearance, in the true acute hydrocephalus. This state he supposes to arise from "a transference or modification of a natural action, in consequence of the excessive degree of a diseased one." From these appearances of the arachnoid, he infers that there is a certain order of affections in which it retains its shining aspect, and there are others in which this is no longer observed. "The latter is that which takes place in the acute hydrocephalus, and is, in truth, the only pathographical phenomenon which particularly distinguishes this disease

* MEDICAL REPOSITORY for April, 1822.

from the other morbid conditions in which fluid is found in the ventricles." He farther concludes that, in this affection alone, the effusion takes place from the arachnoid, and that the pia mater is seldom or never affected; while, on the contrary, in all other instances of effusion between the arachnoid and pia mater, "the diseased action is restricted, with great accuracy, to the vessels of the latter membrane, whether enveloping the convolutions, or penetrating into the central surface." Indeed the hydatoid appearances in the choroid plexus which have generally been observed to accompany this latter class of effusions, seem to have an intimate relation to them. And we think Dr. C. is correct in supposing that this state of the choroid plexus results entirely from the natural structure of the vascular network being unfolded and distended by the effusion of a fluid which is produced by the same action going on in a different part of the pia mater. The difference between these derangements, therefore, in the opinion of this pathologist, is briefly this,—that in all the other affections the fluid is effused from the pia mater, while in acute hydrocephalus it is poured out from the free surface of the epithelion or arachnoid, which penetrates into the ventricles.

Dr. C. conceives the air which is found in the vessels of the pia mater to be formed after death in the majority of instances. But there are others in which this cannot have been the case; respecting these he offers no explanation, but cites the opinion of BICHAT, who thought that the air passed directly from the bronchial cells into the blood-vessels, without previously entering the cellular texture, and that it caused death by interrupting or annihilating the cerebral action. NYSTEN was of opinion that it produced death by interfering with the action of the heart and lungs,—acting primarily on the former organ when it was present in a large quantity, and, when insufficient to destroy its action, operating gradually on the latter by obstructing the bronchial extremities of the pulmonary artery. MORGAGNI supposed that it was destructive, by compressing the brain.

With respect to the formation of tubercles in the pia mater, especially where it sends processes into the cerebral anfractuositities, Dr. C. gives us no information, but proceeds to consider effusions of blood on the surface of the brain. These may take place on any part of the *external* or convoluted surface, but are most frequently observed somewhere along the inferior region, especially on the more vascular parts contiguous to the fissure of Sylvius. Similar appearances may be noticed on the *central* surface. When observed

in this situation, the striated body and optic thalami are the parts most frequently affected. "The effused blood breaks down, softens, and disorganizes the surface, which, instead of presenting its ordinary polished and rounded appearance, becomes rough, irregular, soft, and pulpy. This change generally takes place in the course of about seventy hours to eight days." Dr. C. does not suppose that it is a species of suppuration. It appears more probable to us that it is the result of a certain degree of inflammation of the part which has commenced before, and indeed has given rise to, the effusion which takes place in the situation thus affected, and farther increases the disorganizing process.

"Effusion of blood into the cerebral substance occurs very frequently in the grey matter of the convolutions. This matter is arranged in fibrous lines, the direction of which is perpendicular to that of the convoluted surface, and the blood is generally effused in the interstices between these lines. The effusion is, however, seldom restricted to the grey matter, but in most cases penetrates into the white substance of the hemispheres. A very common situation for this event is the grey and white substance corresponding to the white perforated spot of Vicq-d'Azyr. This part, which is situated at the interior extremity of the fissure of Sylvius, corresponds to the matter which is found to form the striated body, and, when examined more carefully, it is found that the vessels which enter at this part of the organ continue their course into that peculiar substance to which the name of the capsule of Reil has been given. The whole striated body, the capsule of Reil, and the grey matter of the Sylvian fissure, are on this account, and from the vicinity of these vessels to the trunk of the internal carotid, exceedingly vascular; and it cannot be matter of wonder that hæmorrhagic effusion should be most frequently observed in this situation.

"Next to the striated body, the annular protuberance is the most frequent seat of that morbid change which we are now considering. The mode in which the extravasation takes place," depends on the structure of this part. It consists of a twofold series of fibrous lines, the direction of which is perpendicular to each other. "One set is arranged in the longitudinal, the other in the transverse, direction of the body. It is in the interstices of the latter order of lines that the bloody effusion is most frequently observed." BICHAT knew of no case of lesion of this body which was not fatal. Respecting the lesions of the cerebellum, Dr. C. furnishes no additional information. He has

seen the exterior surface of the medulla oblongata but rarely occupied with effused blood. The interior, he thinks, is much more commonly affected.

The intimate and correct view which this very promising pathologist has taken of the morbid alterations of the brain, deserves not to be passed over in a history of the advancement of our science. The same remarks which he submitted on the effects of these hæmorrhagic effusions, when taking place on the surfaces, apply to them with equal force when occurring in the substance of the organ. "If the effused blood do not immediately cause every vital action to cease, it acts as a foreign body, breaks the fibres, or compresses the globules" of which the part is composed. That contiguous to the effusion becomes soft, pulpy, and irregular. "When examined with the microscope, it presents no regular or uniform structure similar to the surrounding parts." "A number of minute granular eminences, very different in size and in figure, surrounded with a semi-fluid substance, is all that the most careful inspection can recognize."

The observations and dissections of the WENZELS, as well as of other pathologists, inform us that the brain may be the seat of three kinds of tumours;—the adipose, the osseous, and the scirrhus. None of these have hitherto been found in the cerebellum. They generally give rise to epilepsy or violent cephalæa, and frequently to symptoms which are various, and which assume no fixed character. The case recorded by M. ANDRAL, in which a well marked cancer of the cerebral substance was found on dissection, is well calculated to throw additional light on this branch of pathology. Having fully detailed the particulars of that very interesting case on a former occasion,* it is sufficient to refer to it on this. Dr. C. makes mention of two small bodies of an irregular form which were found in the anterior lobes of the brain of a young person who died of chorea. He afterwards alludes to the observations of the WENZELS, who observed, in the dissection of three individuals who had laboured under melancholy, insanity, or fatuity, the *hippocampus major* to deviate from its natural size, to be preternaturally soft and pulpy, and to adhere to the contiguous surface of the *cornu*. The researches, however, of the younger PINEL by no means confirm the supposed connexion between this particular lesion of structure and of function. He found, on the contrary, in four cases of fatuity, the cerebral tissue very much indurated, especially towards the situation just

* MEDICAL REPOSITORY for October, p. 298.

mentioned.* The suggestions which Pinel has offered respecting the cause and commencement of this induration, as well as his other remarks, merit the attention of pathologists: the whole subject, however, requires more extensive investigation before any precise inference can be drawn respecting the exact state of the brain in this species of mental alienation.

The excellent cases of Dr. BLICKE† and Dr. WIGHT‡ exhibit in a very lucid manner the phenomena which result from chronic inflammation of the brain and its membranes. The cases, also, of Dr. MACLEOD§ and of M. BRICHETEAU¶ are extremely interesting, more especially as they relate to the symptoms which frequently arise from certain acute states of inflammation occurring chiefly in the membranes of this organ.

On the subject of delirium tremens, we have some excellent observations and cases by Dr. STAUGHTON and Dr. STEPHEN BROWN,¶ both Physicians in the United States, where this disease is very common, in consequence of the frequent and excessive use of spirituous liquors. Dr. Staughton remarks, that on dissection, in this disease, the brain is found to be free from all appearances of inflammation. Slight effusion is present in some cases. When, however, the patient dies in convulsions, the cerebral vessels are gorged. The stomach is often inflamed, and sometimes the intestines and peritoneum. Dr. Brown is of opinion that the delirium of drunkards consists in a peculiar morbid action of the brain and nervous system, brought on by that state of collapse which follows a long course of the action of powerful stimuli.

Epilepsy is a disease which has received considerable attention from modern pathologists; but perhaps the majority of writers on the subject have treated it too much as the result of vascular derangement going on in the brain, instead of considering such derangement, when it does exist, as frequently the consequence of repeated returns of the epileptic paroxysm. We have, however, an exception to this view of the disorder, in the very excellent and judicious paper

* MEDICAL REPOSITORY, October, 1822. *Journal de Physiol.* Août, 1822.

† MED. REPOS. Vol. XVII. p. 201.

‡ Ibid. October, 1822.

§ London Medical and Physical Journal, April, 1822.

¶ *Journal Complémentaire*, Fev. 1822.

¶ American Medical Recorder, April, 1822.

of Dr. SHEARMAN on the subject. This Physician very properly turns our attention to the purely nervous character which epilepsy often assumes, and with which it generally commences, and shows that what is now commonly taken for its cause is as frequently the effect of repeated attacks of the disease.*

The interesting work of Dr. FALRET on Suicide, which points out the relation that this act holds to functional and organic disease of the brain, has lately been the subject of analysis. It is not frequently the case that suicide is committed in the course of long or painful disorders; instances of such occurrence, however, occasionally take place. Dr. BEULAC† records one of this description, in which self-destruction was accomplished towards the termination of a chronic derangement of the lungs. On dissection the right lung was found to be nearly hepatized, and its upper portion excavated and communicating with several of the bronchiæ. This lung was adherent to the diaphragm and ribs. The left lung was large and sound, as were also the heart and abdominal viscera. The complaints of the chest appear to have withdrawn the attention of the Physicians, both in the medical treatment of the patient and in the post mortem inspection, from the state of the brain, which evinced considerable derangement during his illness.

The most important objects in the pathology of the separate classes of nerves, to which our attention ought to be turned, are the views of disease which the researches of Mr. BELL and Mr. SHAW disclose. We gave an account of the application of these views to paralysis by Mr. SHAW in a former Number;‡ to that we must now refer. In the last half volume of the Philosophical Transactions, we find a more extended application of the inquiries of Mr. Bell to pathology, and an interesting illustration of several points in this branch of science which were previously obscure, or, at best, but unsatisfactorily explained. When we survey the origin, extent, and connexions of the respiratory system of nerves, we are prepared to comprehend its importance to the continuance of life. "The infant born without a brain," this anatomist observes, "can breathe if the origins of these nerves be entire. Deep wounds of the brain, though eventually fatal, are not necessarily or instantly so. The man wounded in the spine below the origins of the nerves which we have traced, drags on existence for a time; but a bruise on the

* MEDICAL REPOSITORY, September, 1822.

† Journal Complémentaire, No. 50.

‡ MED. REPOS. September, 1822.

part of the *medulla oblongata*, from which these nerves take their departure, is death in the instant ; a breath is not drawn again.

“ In describing the effects of violence on the *medulla oblongata*, authors have attributed the sudden death to injury of the roots of the nerves of the *par vagum* ; and yet we have a statement from the same authority, that an animal will survive the division of both nerves of the *par vagum*. Now that we find that many respiratory nerves depart from the same centre, and go out to all the parts of the muscular frame, which move in respiration, we can better comprehend, how injury of the *medulla oblongata* suppresses at once the act of respiration in the nostrils, throat, and windpipe, and the action of the muscles both without and within the chest ; even the expression of the agony of dying is, by the injury of the roots of all these nerves, suddenly interrupted, and actual death follows quickly, owing to the cessation of the respiratory functions.

“ A young man was brought into the Middlesex Hospital, who had fallen upon his head. He soon recovered, and lay for some time in the hospital without exhibiting a symptom to raise alarm. He had given thanks to the assembled governors of the hospital, and had returned into the ward for his bundle, when, on turning round to bid adieu to the other patients, he fell, and in the instant expired. Upon examining his head, it was found that the margins of the occipital hole had been broken : no doubt it had happened that in turning his head the pieces were displaced, and closed and crushed the *medulla oblongata*, as it passes from the skull.

“ A man was trundling a wheel-barrow in Goodge Street, which is immediately adjoining the Middlesex Hospital : in going from the carriage-way to the flag-stones he met the impediment of the curb-stone. He made several efforts to overcome it, and, at length, drawing back the wheel-barrow, he made a push, and succeeded ; but the wheel running forward, he fell, and remained motionless. He was taken into the hospital, but he was found to be quite dead. The tooth-like process of the second vertebra of the neck had burst from the transverse ligament of the first. The impulse given to the head had done this violence, and had, at the same time, carried forward the spinal marrow against the process, and on which it was crushed.

“ These nerves, so peculiar in relation and function, are differently influenced by disease from the other division of the nervous system. Their functions are left entire when the voluntary nerves have ceased to act, and they are sometimes strangely disordered, while the mind is entire in all its offices,

and the voluntary operations perfect. In tetanus the voluntary nerves are under influence, and the voluntary motions locked up in convulsions; in hydrophobia the respiratory system is affected; and hence the convulsions of the throat, the paroxysms of suffocation, the speechless agony, and the excess of expression in the whole frame, while the voluntary motions are free.

"The frequency of sudden death, where no corresponding appearances are exhibited in the brain or heart, leads us to consider more attentively the only part of the system through which life can be directly extinguished. In *angina pectoris*, we witness the agony of suffering in this system when the patient survives; and when he dies suddenly, we can imagine it to proceed from an influence extending over these nerves, and interrupting the vital operations. We have seen that a branch of this system may suddenly cease to operate on the corresponding muscles, and that in this way the side of the face may be deprived of all participation in the act of respiration, and all expression be lost. What would result from a more universal defect in the actions of this class of nerves, but sudden death?"

This pathologist goes on to inquire, "could we expect that the diseases of lethargy and somnolency should be distinctly divided from apoplexies, while the organs on which the distinction of symptoms principally depends were imperfectly understood?"

"The position of the asthmatic shows how this system is affected; whether directly or indirectly, it is not our present business to inquire. He stands stooping forward, resting his arms so as to throw the muscles of the chest into operation upon the ribs. The position of the head and the rigidity of the muscles of the neck, the action of the mastoid muscle, and of the cutaneous muscle, visible in the retraction of the cheeks and mouth, and the inflation of the nostrils, carry us back in review of the nerves and muscles of respiration.

"That a system of nerves so intimately combined as this is with the other parts of the general system, should suffer in hysterical disorders, cannot surprise us; and admitting that irritation reaches to the respiratory system, we may perceive how rapidly the change may be produced, from the convulsions of laughter to those of crying; and where, if there be a corresponding condition of the mind, it rather follows than precedes the expression of the frame."

Dr. HEALY, of Dublin, has given a short account of a species of palsy which he has met with in the superior extremity, and which he conceives to be unconnected with any organic disease of the brain or nervous system. He con-

siders it to arise from pressure on the nerves, occasioned by lying with the head resting on the arm. It was invariably found to yield to electricity, "after the usual remedies for palsy have been tried without effect."*

The case of *tic douloureux* related by Dr. WILSON,† which appeared to originate in a morbid state of the digestive organs, is important, inasmuch as it marks, in a very distinct manner, the intimacy of this relation. The patient described the pain "as always commencing at a point in the upper lip, on the right side, where it is joined by the ala of the nose; from whence it spread upwards with great violence, shooting along his cheek to his temple, and over the whole side of his head, the pain being so severe as to make him cry out in great agony." This individual had used laxatives freely, chiefly saline, with some doses of calomel; he also had an emetic or two, which did not operate freely: these were followed with carbonate of iron, in the dose of one dram thrice a day for two weeks, and subsequently the arsenical solution was taken freely, without any benefit. Dr. Wilson afterwards prescribed a bolus, containing seven grains of calomel and one of tartar. antimony. "By this dose he vomited a considerable quantity of dark-coloured, corrupted bile, and had three very offensive stools." This gave considerable relief, and was repeated every other morning. "By the second and third doses, he vomited dark-coloured bile each day, and voided offensive stools, mixed with a great quantity of hard scybalæ. By the fourth and fifth doses he continued to vomit unhealthy-looking bile, mixed with viscid phlegm—he also passed offensive stools mixed with scybalæ as before." After the evacuation of these offending matters he quickly recovered. On these grounds Dr. Wilson concludes that *tic douloureux* is decidedly a result of morbid sympathy.

A very interesting and singular affection of the nervous system, which came under the observation of M. MAGENDIE, has been related in a former Number,‡ to which we refer our readers. The only work|| which has appeared, during the preceding year, on the pathology of the nerves, has been subjected to an analysis. § It contains some important facts, but the author has drawn inferences from them which they by no means warrant, and has mixed them up with so much

* Dublin Hospital Reports, Vol. III. p. 253.

† Medico-Chirurgical Review, No. II. p. 691.

‡ For August, 1822.

|| Observations on the Anatomy, Physiology, and Pathology of the Nervous System. By Joseph Swan, &c. 1822.

§ REPOSITORY for November, 1822.

premature theory and irrelevant details, as greatly to detract from their value and from the character of the book.

The next subject to which we shall direct attention is a review of the facts connected with the vascular system which have come to our knowledge. The most important of these are the effects which were observed, in the experiments of M. GASPARD, to supervene in the system when various animal and vegetable substances in a putrid state were injected into the circulating fluids, or into the cellular texture, of the body. As the observations of this pathologist were fully detailed in a former Number, * we can now only request attention to the very important views of disease to which they point.

No morbid alteration to which the heart is subject is more interesting, or holds a more intimate relation to the general state of the system and habit, and especially to the more important abdominal viscera, than softening of the heart. A case of this description, in which blood appears to have been poured from the relaxed capillaries on its external surface, was related by Mr. FITZPATRICK in our seventeenth volume.† The remarks and histories of similar cases that were added at that time render farther observations unnecessary.

A case, related in the REPOSITORY, in which the pericardium was found adhering around the whole surface of the heart, appears interesting, from the circumstance of its having been complicated with acute splenitis, and with hypertrophy of the right side of the heart, and ossification of the semilunar valves, speedily inducing hydrothorax. The organic disease in the chest was marked chiefly by a strong and intermitting pulse‡, with dyspnœa, and violent paroxysms of spasm about the larynx which frequently threatened suffocation.

Dr. ASHBURNER has related a very interesting case of rupture of both ventricles of the heart,|| which occurred in a gentleman far advanced in life, who had experienced an attack of paralysis three years previously. On Monday he complained of having passed a very bad night, "and he suffered from headach and thirst. His pulse was 72; full and hard. He remarked that he was giddy, and that there was constantly a pain, not severe, but troublesome, about the collar-bone. This pain was worse when he endeavoured to bring down either ear towards his breast." He was cupped, and experienced partial relief. On Tuesday evening the

* MEDICAL REPOSITORY for June, 1822.

† Ibid. for April, 1822.

‡ Ibid. for August, 1822.

|| Medical and Physical Journal for December, 1822.

pulse was 78 ; " it had a jarry beat. On Wednesday it continued the same, as to number and character." His feelings, however, were improved. In the course of the morning the pulse got up to 82. He became more sensible to external impressions, and his powers of vision were improved. In the evening the pulse was 92. " About nine o'clock, having just left the water-closet, he was heard to call his servant, in a voice more than usually loud and urgent." He was found sinking into a fainting fit; the head hung forward; the face was livid; and the pulse was almost imperceptible. " He was breathing with stertor; the extremities were becoming cold." In the attempt to remove him, after having become better, the faintness again recurred, the breathing was again stertorous, and the pulse was quite gone. For a short time he again appeared better. " Upon being supported to take some fluid, he did not readily do it; he coughed, and endeavoured to inspire, gasping repeatedly with a loud and distressing sound; but the effort was too great for him, and, falling back, he expired, about an hour from the period of the first fainting fit."

On examination, forty-three hours after death, it was found that the bony structure of the skull was unusually thick. " The arachnoid membrane and the pia-mater indicated a state of chronic inflammation: they were considerably thickened, and separated from each other by a considerable effusion of yellow serous fluid. The substance of the brain was every where soft and pulpy; its blood-vessels were empty; the arteries throughout the cavity of the cranium were considerably ossified. There was a small cyst, apparently of long standing, about the size of a garden-pea, in the pons varolii." The lungs were healthy, " but they were loaded with venous blood. The pericardium was found to be full of blood, to the amount of about twelve ounces; a small part only of this blood was coagulated. Upon the anterior surface of the left ventricle of the heart there were two or three small openings, which admitted the passage of a probe into its cavity, where there was a quantity of uncoagulated blood. On the posterior part of the right ventricle, near its junction with the left, was a jagged opening, sufficiently large to admit the passage of the fore-finger into its cavity, which was quite empty. The muscular structure of the heart was much thinner than it is in the healthy organ; the walls of the right ventricle being not a third part of their usual thickness: they were very friable, and tore like wetted brown paper. The aorta was enlarged, from its junction with the heart, along the course of the arch; and behind its inner coat were numerous spots of ossification."

Instances in which rupture has occurred in one ventricle are occasionally met with, but we are not aware that a case similar to the present has been previously recorded.

Another singular instance of morbid alteration in the substance of the heart, which furnishes an additional fact respecting organic diseases of this organ, has been related by Mr. ROSE.* It occurred in a female, aged sixty-nine, who had long been feeble. "The illness which proved fatal to her was dysentery. During the progress of it, she often complained of a great sense of oppression about her heart. The pulse was quick, but was never observed to intermit." For several days before she died, pulsation was not perceptible at the wrist, and could hardly be felt high in her arm.

The examination of the body detected "extensive ulceration of the inner coat of the great intestines through the whole of their course, especially of the lower part of the colon and rectum. There was a slight degree of recent inflammation of the pleura on both sides of the thorax, and that membrane adhered every where to the pericardium. The cavity of the pericardium was entirely obliterated. On the anterior part of the right auricle of the heart, the parietes of that cavity, to the extent of about two and a half square inches, were converted into bone. The ossification appeared to have begun in the pericardium, and to have extended itself gradually into the muscular texture; at least, it was more complete on the surface than towards the cavity of the auricle. A deposition of bone, to a still greater degree, had taken place in the muscular structure of the left ventricle, almost the whole of which, with the exception of a small space near the apex, formed a solid mass of bone. One segment of the valvulæ mitrales, between the left auricle and ventricle, was ossified, and formed a part of the bony mass. The valves of the aorta were but slightly ossified; the corpora sesamoidea alone being converted into bone. Bone was deposited in the coats of the aorta, in different parts of its course, especially round the origin of the three vessels sent off from its arch, and round that of its azygos arteries." This singular specimen is preserved in the museum of the College of Surgeons. Ossific deposit, to a greater or less extent, has been frequently observed in various parts of the heart or of its appendages. One of the most extensive ossifications that has been found was detected by BARTHOLINUS in the heart of Pope URBAN VIII.; but neither it, nor any other of which we have heard, equals the instance just related.

* *Medical and Physical Journal for December, 1822.*

Instances of sudden death from affections of the heart have not been uncommon; and they have been too frequently taken for apoplectic seizures. One of the best diagnostic symptoms by which the former cases may be distinguished, is the absence of stertorous breathing previous to dissolution which is instantaneous. It is not often that life is thus suddenly extinguished, from deranged function of the heart, without evident appearance of morbid structure in this organ. One instance, however, of such occurrence appears to have existed in the case of the late Mr. WILSON, who expired instantaneously while writing at his desk.* On examination, "the whole surface of the left lung adhered to the sides of the chest. Both lungs were loaded with blood and fluids, the left lung more especially; yet in neither was there any tubercular disease or induration. Both sides of the heart were empty, as also the thoracic aorta, and there was no disease in them except a slight thickening of the semilunar valves of that vessel." Morbid appearances were also found in the membranes of the brain, but not to that extent which could occasion dissolution. "It therefore appears, that at the time of the death, the blood did not return to the heart, either from the lungs or general system." "As to the occasion of this cessation of a vital function, it seems probable that it was influenced considerably by mental affections."

In a case of passive enlargement of the heart, detailed in our December Number, the "valves of the aorta were shrivelled up to less than half their natural size." The mouth of the vessel was of its natural calibre. A similar appearance of the aortal valves, connected with hypertrophy of the left ventricle, and inflammation of, and effusion into, the pericardium, has been recorded by Dr. CUMING.†

One of the most important derangements to which the arterial system is liable, is inflammation of its internal membrane or tunic. A very interesting fact of this description was circumstantially detailed by Mr. BRYANT,‡ in which this disorder appears to have taken place in the external iliac artery, so as to occasion the effusion of coagulable lymph, and the obliteration of its calibre.

On the subject of inflammation we have had the observations of Dr. LUCAS; but as it is our object to trace the actual progress of medical science, and to record such important facts as have come to our knowledge, we cannot stop to characterize a work which has added nothing to what has been previously known, and which, indeed, has already

* Edinburgh Medical Journal for April, 1822.

† Dublin Hospital Reports, vol. iii.

‡ MEDICAL REPOSITORY for August, 1822.

received from us an ample analysis. The most interesting opinions which have been lately published respecting the phenomena and effects of inflammation, are those which have been promulgated by M. LALLEMAND.* This pathologist conceived that he had proved, in his very excellent work on the pathology of the encephalon, that one of the most constant effects of every acute inflammation is to destroy the cohesion of the affected tissue. Having established this position, as it respects the brain, in the work alluded to, his object, in his subsequent memoir, to which we have referred, is to extend this view to the other textures of the body. He very justly considers that the hardness found in inflamed parts is entirely the result of the fulness of the vessels and the effusion of fluids giving density, but not cohesion to the texture. In proof of this he instances the state of the lungs in health, when they are elastic, and incapable of being easily torn, — and in inflammation, when they become heavy, dense, inelastic, and are divided without difficulty. When this state of the vessels takes place, the lungs present the granulated appearance of the liver; afterwards, when pus is formed in the cellular membrane, and the fragility of the lung increases with its density, then the diminution of cohesion is very distinct from the increase of density, and it even proceeds in an inverse ratio. Changes similar to these take place, in a greater or less degree, in all other inflammations, and in all other textures. Thus a phlegmon, although apparently so hard and shining, will be found, nevertheless, in its cellular texture, to have become more brittle. As inflammation proceeds and an abscess is formed, the pus, according to this pathologist, is infiltrated into the meshes of the cellular substance; so that, if divided into slices, the latter presents a whitish, yellowish, or greyish mass, from which the pus may be pressed as from a sponge. The cellular membrane retaining this pus loses still farther its tenacity, and is at last torn at the most altered parts, that is, in the centre. At this point, the cellular tissue which retains the pus, as if combined with it, having no longer a sufficient power of resistance, is farther broken down; and thus the fluid is allowed to unite in larger and larger masses, in the middle of which those portions of cellular substance most altered are found reduced nearly to the consistence of pus. The abscess points towards the surface, because there is least resistance to the pressure of the pus from without inwards, and it opens at the centre, owing to the inflammatory softening and destruction of the cellular tissue having commenced in that part. The skin is therefore not destroyed by a true mortification, but because the inflammation destroys

* *Journ. Univers. des Sciences Médicales*, July, 1822.

also its cohesion, and reduces it to pap. On the same grounds M. LALLEMAND explains why "cold abscesses, abscesses by congestion," do not perforate the surface until after inflammation comes on, and why the pointing part of an abscess is red. The same process produces the destruction of the skin, the cellular tissue, the tendons, and the aponeuroses, in carbuncle and whitlow; and in the same manner may be explained the destruction of parts by long continued pressure, of an artery by a ligature, &c. DUPUYTREN had observed, that a ligature passed around an artery, when the surrounding cellular membrane is inflamed, always separated two or three days sooner; and the risk of secondary hæmorrhage was greater. Therefore it becomes a point of the first importance never to place a ligature upon a vessel at the place where it is inflamed.

It will be observed, that, at page 375 of our Number for May, we ascribed the vascular phenomena usually denominated inflammations to the state and influence of the ganglial nerves on the arteries and capillaries to which they are distributed. A somewhat similar view has since been entertained by a writer in a late Number of a contemporary Journal.*

A very interesting instance of death by inanition from spontaneous hæmorrhage, which suggests some important reflections, has been recorded by Mr. BONNAR.† A man, aged 34, of a spare habit of body, lost, by epistaxis, about three pounds of blood. This took place about the end of August. "In about ten days afterwards, as soon as he had recovered his former strength, the bleeding recurred, and continued to do so at intervals till the 3d of October, when he died." The quantity of blood which he lost was carefully measured by the attendants, and was calculated to be upwards of thirty-five pounds. On examination after death, the heart and larger vessels were found nearly destitute of blood. "On carefully removing the ethmoid bone by sawing on each side of it, and cutting away the external parts of the nose, so as to have a full view of its cavity, nothing particular could be observed. There was no collection of coagulated blood; but the mucous membrane seemed to be considerably more thickened than it usually is." This fact shows the correctness of the observation of LAENNEC respecting hæmorrhage from the lungs, viz. that the bleeding does not generally arise from the erosion or rupture of a small vessel, but from the surface of the air-cells. Indeed hæmorrhage from the nose and from the bronchial ramifications may naturally be expected to possess a similar character, when we consider the identity

* Edinburgh Medical Journal for July, 1822.

† Ibid.

of surface, and the relation of function between the parts from which it is poured out.

In the history of this case some facts of considerable importance must be noted, and they ought to be kept in recollection during the employment of large depletion. "To the very last the muscular strength of the patient remained tolerably good. Almost immediately before death he could raise himself in bed; and had it not been for the oppressive and most painful sickness, he would have been capable of a very considerable degree of exertion, at a time when not many ounces of blood were circulating in his system." "After every one of the attacks, *the pulse rose considerably in strength* and frequency. The blood was, in each instance, very soon coagulated, but showed none of the buffy coat."

The rising of the pulse after excessive bleeding has been remarked by many of the best informed pathologists; but to the experienced observer this excessive action of the arterial system has a particular character, which he can more easily recognize than describe. It appears, in some measure, to arise from the vital action of the vessels upon their contents, and from the mode in which they accommodate their calibre to the quantity of blood circulating through them; thus preserving (by this action), while the nervous influence is not diminished by any other sedative influence, as in fever, &c., a continued supply of blood to support or to excite the heart's contraction. A knowledge of the phenomena resulting from excessive losses of blood ought to teach us that an excited state of the arterial pulsation is by no means a proof of the necessity of depletory measures.

Purpura hæmorrhagica is a disease respecting which we have much to learn. Viewing it as particularly connected with the state of the vascular system and of the circulating fluids, we notice at this place the cases of it detailed by Dr. DUNCAN and Dr. JOHNSTON.* In both of these the particular characters of the disorder were well marked. The pulse was small, quick, and weak, with hæmorrhage from the mucous surfaces, and great prostration of strength. Yet from the influence of that bane to our Profession, the *verba magistri*, a depletory plan of treatment was instituted.† The blood that was drawn in the one case did not coagulate, and in the other it coagulated slowly, and "the coagulum had the

* Edinburgh Medical Journal for July, 1822.

† Some remarks will be made upon the treatment of this disorder under the head *Therapeutics*. At present we confine ourselves entirely to *Pathology*.

appearance of jelly, being tremulous and transparent, in itself almost colourless, but with a pink tinge, from the red globules, which had sunk to the bottom, being seen through it. On the surface it was radiated, but had no appearance of a buffy coat. It had much the appearance that would be put on by mere mechanical separation of its parts; the whole red globules, which were unusually deficient in number, were lying almost loose at the bottom of the crassamentum, and the fibrine and serum formed a nearly colourless mass over it." After death, which soon took place in both instances, the serous surfaces were observed to be thickly spotted with petechiæ; and the mucous membranes, as far as they were examined, were covered with petechiæ, vibices, and ecchymoses. In the case detailed by Dr. Johnston, "the heart was paler and smaller than usual, and was lacerated by slight exertions of the fingers. It was spotted with petechiæ, some red, others purple. They were larger than those on the skin." The left ventricle was empty; the right was distended by a quantity of uncoagulated blood. The surface of the spleen was entirely purple. The surface of the liver, and the internal coat of the stomach, were also covered with maculæ. The morbid appearances in the case by Dr. Duncan were nearly similar. The head was not examined in either instance.

Dr. Duncan adds some reflections, on the pathology of the disorder, respecting which we will offer a remark or two. The possible modes in which he conceives the disease to arise, are—

"1st. Increased tenuity of the blood, allowing it to escape from the superficial extremities of the minute arteries.

"2d. Dilatation of the mouths of these arteries, allowing natural blood to escape.

"3d. Tenderness of the coats of the minute vessels, allowing them to give way from the ordinary impetus of the blood.

"4th. Increased impetus of the blood rupturing healthy vessels.

"5th. Obstruction in the vessels causing rupture with natural impetus, and without increased tenderness.

"6th. Two or more of these causes may act simultaneously or successively."

We conceive the phenomena of the disease to warrant the inference, that the two first of the six causes are usually requisite to constitute its existence; and perhaps also the third and fifth are occasionally, if not always, present. But allowing that the first, second, third, and fifth are more or less its cause, or any two or more of them, we shall have *its treatment* placed on a tolerably sound pathological basis,

and which ought to be diametrically opposite to depletory measures. Indeed, the plan of treatment which we have long since recommended in all passive hæmorrhages appears particularly requisite in this disorder, and we know that it has proved successful in it. We cannot leave the subject without remarking on the impropriety of classing purpura hæmorrhagica with cutaneous affections. The skin is perhaps the least affected of any of the surfaces. If we were required to state in a few words the pathological state of the disorder, we should not hesitate to say that it is one of the vascular system generally, depending upon some condition of the ganglial nerves which are ramified on it, and that this condition either arises from, or produces, more probably the latter, an attenuated; or otherwise morbid, state of the circulating fluids.

But little has lately fallen under our observation which is immediately connected with the pathology of the absorbent system. The interesting experiments of M. GASPARD, already referred to, illustrate, in some measure, how far its functions may be concerned in the production of some of the most important disorders to which the body is liable. Viewing the spleen to be a viscus intimately related in its functions to the absorbent system, the interesting work of Dr. GROTANELLI on its diseases may be mentioned at this place; but as a full review of its contents has appeared in one of our preceding Numbers,* we shall not now stop to notice any of its characteristic features, but refer our readers to that analysis.

The pathology of disorders affecting the muscular system has received some attention during the period assigned to this review. Dr. KENNEDY has recorded several important cases of tetanus in our Numbers for May and June. The pathological details contained in his excellent memoir are well calculated to illustrate the nature of this formidable malady. The other treatises and papers which have appeared on this subject, as they relate chiefly to the treatment which was employed in those cases which came under their authors' observation, will be noticed more appropriately in the section, *Therapeutics*.

Passing from the review of some of those diseases which are more intimately related to the general systems of the body, and respecting which we have lately obtained important information, we stop at those which are seated almost exclusively in particular organs. From amongst these, derangements of the digestive functions claim the first attention.

* MEDICAL REPOSITORY for April, 1822.

Dr. CRUVEILHIER* has described what he supposes to be a new disease, which he calls the gastro-intestinal malady of infants with gelatinous disorganization, but which we consider to be no other than the mucous disease of RÖDERER and WAGLER, or an inflammation more or less slow, which commences in the mucous membrane of the stomach or intestines, and sometimes extends from the mouth to the anus, producing ulceration of the internal coats, with thickening of the peritoneal coverings. We have seen many instances of the disorder which M. Cruveilhier describes, and consider that he is by no means correct in supposing it to be unconnected with inflammation. We have every reason for asserting that an inflammatory state, according to the usual acceptation of the word, does exist in an atonic form. M. LALLEMAND, in the memoir already referred to, espouses the same opinion with ourselves, and states, with considerable accuracy, the appearances which are observed on dissection. Amongst these a softened, tumid, or thickened, and, in parts, ulcerated, state of the mucous coat, is the most remarkable. Besides this pulpy and ulcerated condition of the internal surface of the intestines and stomach, M. L. takes notice of a swollen or ecchymosed, and at the same time softened, state of this membrane, forming large red patches, which he has observed in cases of hæmatemesis, and of bleeding from the rectum. On pressing these patches, or ecchymoses, they separated with ease, and left a depression, with the muscular tissue exposed at its bottom. Hæmaturia presents a similar appearance. We cannot, at present, take further notice of M. Lallemand's excellent memoir on this subject. An opportunity may offer of turning our attention to it again.

We refer our readers to an interesting account of rupture of the stomach,† from muscular exertion, which was detailed by Mr. BROWN. On dissection the laceration of the coats was manifest, and the mucous tunic evinced considerable inflammation and ecchymosis, which, according to the view of M. Lallemand, may have greatly predisposed it to rupture. Indeed, in the note which we added to the case, it was remarked that the diseased state had evidently rendered it more liable to the laceration which it suffered.

As intimately connected with inflammation of the mucous tunic of the digestive canal, the pathology of dysentery

* Médecine Pratique éclairée par l'Anatomie et la Physiologie Pathologique. Par J. Cruveilhier, D.M., &c. Paris.

† MEDICAL REPOSITORY, Vol. XVII. p. 108.

obtrudes itself upon our notice. The excellent paper of Dr. CHEYNE on this disease has already received from us a full share of notice. Since its appearance, Dr. O'BRIEN has published a distinct treatise on the subject. His book, however, adds nothing to our knowledge, either respecting the pathology or treatment of the disorder, and as little to his literary reputation.

Dr. ADAM* has given a detailed account of the cholera morbus of India, according as it fell under his own observation at Calcutta; which adds but little to what has formerly reached us respecting the same disease. "Cholera," Dr. Adam says, "displayed itself in three stages or states; 1st, Of oppression and excitement; 2d, Of oppression and exhaustion; and 3d, Of febrile reaction." On dissection of those who died in the first and second stages of the disorder, the duodenum and jejunum presented a slight blush of inflammation in their internal membranes, and the ilium exhibited decided inflammatory action on the same surface. The liver and other abdominal viscera were healthy. "In the thorax, the right auricle was enormously distended with a black coagulated blood, and the veins about the heart were of a larger size than usual. The left side of the heart was quite collapsed, and the auricle rather diminutive. These last circumstances more particularly attracted our attention, as they appeared connected with the extraordinary anxiety and oppression which formed so characteristic a symptom of the disorder." Those who died in the third stage, or that of febrile reaction, presented the same appearances on examination, and indeed the same symptoms during life, as those who were seized with "the common Bengal remittent fever." This circumstance confirms an opinion which we have maintained on a former occasion, that the malady which has been described as the cholera morbus of India was no other than a particularly violent and destructive form of epidemic fever, which generally overpowered, in a rapid manner, the energies of the system, and annihilated its functions by the force of its invasion; and that the appearances on dissection, especially the black state of the blood, arose chiefly from the suspension, diminution, or destruction of the nervous influence occasioning, in a greater or less degree, a suppression of the decarbonizing function carried on by the lungs upon the blood, and of the actions of the liver and other important organs. The vomiting and purging, with the other symptoms of cholera, were also characteristic of this state of the system,

* Medical and Physical Journal for September, 1822.

38 *Sketch of the Progress of Medicine, &c. by the Editor.*

and agreeable to the phenomena which are frequently witnessed on the invasion of the more violent epidemic disorders.

The lately published observations of Mr. WHITE on the diseases of the rectum, which were reviewed in a late Number of this Journal,* and the cases of stricture of the colon and rectum, by Mr. PENKIVIL,† have tended to illustrate these important derangements. Some interesting instances of intestinal concretions will be found in the December Number of the REPOSITORY; there also will be noticed a singular case of dilatation of the stomach, detailed by M. ANDRAL.

Functional and organic diseases of the biliary organs have engaged a considerable portion of attention in this country in modern times. Within the period whose medical history we are now giving, we have had some facts of importance and some judicious remarks laid before us respecting this class of derangements. Amongst these, the cases of jaundice, with the dissections, furnished by Dr. MARSH,‡ claim from us the first notice. This Physician professes to notice more particularly those forms of jaundice “in which dissection fails to discover any mechanical obstruction: in which the absorption of bile, and the admixture of this fluid with the blood, have been produced by circumstances which leave no trace behind,—at least none that the most accurate anatomical investigation has as yet been able to detect.” “The object of his paper is to bring forward instances in which icterus is connected—sometimes with a deranged and fatal affection of the brain—sometimes with a diseased condition of the mucous membrane of the intestines.” The importance of this connexion will be readily admitted; and the annals of our science furnish many instances of its occurrence. We can fully confirm, from our own experience, the general correctness of these positions, which Dr. M. more fully illustrates by the cases and dissections, which occupy a considerable portion of his excellent memoir. The first case alluded to shows, what every man of observation may have frequently observed, the deleterious effects of protracted courses of mercury on the nervous system generally, and particularly upon the functions of the brain. We have known instances in which the continued or frequent use of this mineral, under improper circumstances, has not only caused the more decidedly marked phenomena of mental alienation, as in that instance, but, what we believe to

* Vol. XVII. p. 332.

† Edinburgh Medical and Surgical Journal for July, 1822.

‡ Dublin Hospital Reports, Vol. III. p. 265.

be its more frequent consequences, melancholy and suicide. An important pathological and practical fact is furnished in the case referred to by Dr. Marsh, and although it is well known to many, yet it claims some attention at present. "The condition of the large intestines," says Dr. M., "in this female was very remarkable; the quantity of knotted *fæces* which occupied the intestinal pouches was almost incredible: and this claims the more attention when it is known that *alvine* evacuations had been regularly maintained during the whole time." These were fluid and watery. This and similar accumulations in the large intestines connected with jaundice led Dr. M. to conclude that they frequently became the cause of the latter affection. We cannot follow his account of the cases which more particularly point out the connexion between jaundice and affection of the brain. In some of these accumulations of *fæces* in the bowels, or other derangements of these viscera, were also present. In one case of this description, the transverse folds of the inner membranes of the cystic duct seemed to project so that a probe could not be passed either upwards or downwards. The stomach and intestines were much contracted. In this person icterus came on, from strong mental emotion, while under the influence of mercury. To this disorder fever and delirium supervened, in which the patient died. No particular lesion was observed in the brain.

One of the most interesting cases of this description came under the observation of Dr. COLLES, of Dublin, in the person of a young gentleman who consulted him for chancre. "He directed for him alterative doses of calomel, which were persevered in for about four or five weeks. The mercury seemed to agree; no untoward symptom appeared; and the ulcer was completely healed. About three weeks afterwards this young man was observed to be deeply jaundiced; and having continued two or three days in this state, he was seized suddenly with delirium, followed by repeated convulsions." Dr. C. found "the symptoms evidently indicating a most violent affection of the brain. Every viscus of the body was most accurately examined, and not a trace of disease could be discovered."

Dr. MARSH very justly remarks, that "the close relation which exists between the liver and the brain, is not only exemplified in disease being propagated from the former to the latter; but also is strikingly illustrated by the opposite fact, viz. that morbid action, going forward in the brain, often implicates the liver; and causes either derangement of its functions, or active inflammation." These positions are so well known to our readers that proof of them is not required.

We therefore leave this subject, and notice the very intimate connexion which subsists between icterus and a morbid condition of the mucous surface of the bowels.

It could be shown from the observations of the best modern pathologists, and from our own experience, did our plan or limits permit us, that inflammation has been often observed to commence in, and to extend itself from the mucous coat of the intestines or stomach, along this membrane, where it lines the internal surface of the ducts and gall-bladder, causing obstruction of the calibre of these ducts, either owing to the thickening that takes place in this tunic during the course of inflammatory action, or to the effusion of coagulable lymph. This obstruction may also arise from the contraction of the fibrous tunic of the ducts; as is observed when the inflammation extends to the mucous coat of the gall-bladder: in these cases this viscus is generally found contracted, unless the obstruction of the ducts or some other mechanical impediment prevent it from evacuating its contents.

Dr. Marsh has illustrated, in a tolerably satisfactory manner, the relation between jaundice and some of the diseases of the intestinal canal. On this subject he offers the remark, that when the inflammation is propagated to the gall-ducts, "the natural stimulus of the bile, instead of producing in them the moderate contraction necessary to propel the fluid, causes so great a degree of contraction as altogether to hinder the descent of the bile into the duodenum, and thus gives rise to jaundice." The diseases in which he conceives this to take place are,—dysentery, inflammation of the stomach or liver from the ingestion of cold water when the body is overheated, typhous fever, bilious remittent fever, infantile remittent fever, and gastro-hepatic disorder. The cases which he has given, illustrative of this connexion, are calculated to support these views, and are altogether interesting.

Mr. RYLAND has published in this Journal* some important observations showing the intimate relation between the diseases of the mucous coat of the digestive tube and those of the liver. He has also offered some remarks relative to the accumulations of bile, which frequently take place during deranged states of the biliary functions, not only in the gall-bladder, but also in the biliary ducts which receive the bile from the secreting texture of the liver. When such accumulations exist, he has observed that a very gentle dose of aperient medicine frequently produces very violent effects from the stimulus it gives these viscera to discharge the bile with which they are loaded. This circumstance explains the

* For November, 1822.

very active operation of gentle aperients, on some occasions, and the failure not only of these, but of more active purgatives, at other times. Our experience, both in this climate and in a tropical one, and, indeed, in our own person, fully confirms this opinion, which, we think, few will dispute. An important case of disease of the liver, heart, lungs, and stomach, has been detailed by Dr. JAMES JOHNSON.* Indeed, the extent of disorder in all the thoracic and abdominal viscera was truly remarkable.

Turning our attention from derangements of the biliary functions to those of the urinary organs, dropsy of the kidney first attracts our notice. This disease has been very seldom observed. In a case lately published by Dr. HOWISON,† the symptoms were obscure and anomalous, and the disorder was not marked by any diagnostic symptom besides the absence of emaciation. On dissection, a large oblong flat tumour was observed to extend "upwards towards the true ribs, and downwards towards the pelvis—backwards towards the spine, and forwards to near the umbilicus." It measured about a foot in length and nine inches in breadth, being of a kidney shape. Upon removing this tumour it was "found to be formed entirely of the dilated kidney, the cortical and medullary part of which had disappeared, except a few small portions, leaving nothing but a cavernous cyst, consisting of the proper external membrane of the kidney, and its internal membrane much thickened. It was divided into three large irregular cells, freely communicating with the dilated pelvis, into the apex of which the ureter, of its natural size, opened." "The fluid did not possess the smell, taste, or any of the peculiar sensible qualities of urine, but was of a *whitish colour*, like pus diluted with serum." On emptying the kidney a small calculus was found, which, on being tried, exactly filled the orifice of the ureter.

A very singular case of this description, in which the dropsical accumulation had taken place to a still greater extent than in the former instance, has been detailed by Dr. JAMES JOHNSON.‡ The disease appears to have been induced, in this patient (a female), by having damp clothes frequently placed next her skin. More or less pain, in the region of the kidney, succeeded, and to this a state of urine either scanty and high coloured, or plentiful and *white like milk*. As the disorder advanced, it was taken for ovarian dropsy by the medical gentlemen who saw her. At last, the accumulated

* Medical and Chirurgical Review for September, 1822.

† Edinburgh Medical Journal, No. 73.

‡ Medical and Chirurgical Journal, No. 11.

fluid, which was of a *milky appearance*, was evacuated *viâ naturali*. She soon afterwards died. The abdomen was carefully examined. The bladder was seen moderately distended; the ovaria and Fallopian tubes, on each side, were perfectly distinct, natural, and healthy. An immense pouch, which filled up the hollow of the ilium, from the groin to near the liver, and from beneath the anterior parietes of the abdomen back to the spine, was found united to the caput coli. The ureter, which was traced from this bag, was very turgid, and could be emptied of its contents by pressing the fluid down into the bladder, but immediately filled again from the sac. "On making an incision into the cyst, six or seven inches in length, about three pints of the same fluid as came from the ureter was found in its cavity." Its parietes varied a great deal in thickness. "The whole internal surface, however, was very vascular, and thickly studded with a kind of mamillary, or papillary bodies, varying in size from that of a pin's head, or less, to that of a very small pea. Several thin laminae or semicircular septa projected from different parts of the walls of the cyst; but the largest of them never went half across its diameter."

This disorder is entirely distinct from the hydatoid derangement of the organ. It appears to have been first described under the appropriate name, dropsy of the kidney, by RUDOLPHI and FRANK. The latter found upwards of sixty pounds of water collected, in a case which he mentions in his work "*De Curandis Hominum Morbis*;" and in his "*Interpretationes Clinicæ*" another instance is detailed, wherein a similar accumulation, but to a less extent, was observed. DUMERIL has also related a similar occurrence. "It appears," says Dr. Johnson, "that, from some cause or other, the pelvis of the kidney had become distended to the size of the inner surface of the cyst, while the glandular substance had either become entirely absorbed, or was expanded between the pelvic and capsular tissues, forming probably the papillary bodies above described, and still retaining the secretory function."

On the subject of diabetes Dr. MARSH has given an excellent paper, in the last volume of the Dublin Hospital Reports; but he has added little to our knowledge of its pathology. He observed that the disease was greatly diminished by a lax state of the bowels; and by free excretions from the surface which were promoted by the vapour bath. The black appearance of the urine has already attracted our attention in this Journal; and Mr. THOMPSON has detailed a case in the November Number well calculated to illustrate its nature. The remarkable case of inflammation of the urinary

bladder, recorded by Mr. LISTON,* is important in more points of view than one. The pathological fact, that mucous membranes generally throw off the adventitious membranes which are occasionally produced upon their surface by acute inflammation, and that adhesion of their opposite surfaces never takes place, by the effusion of coagulable lymph, as in serous membranes, is fully supported by it; while it evinces the great propriety of the modified operation which this Surgeon performed, who appears to be at the head of surgical science in Scotland. The recent work of Mr. BINGHAM, on diseases of the bladder, is reserved for an early analysis. We will not, therefore, anticipate any observations which we shall have to make respecting it.

A review of the additions which have been made to our knowledge of the derangements of the urinary apparatus, naturally conveys us to the consideration of disorders in the generative functions and organs. Of these, uterine hæmorrhage is the most important. Dr. DEWESS, of Philadelphia,† has published the first part of an essay upon this subject, but we forbear sketching its outlines until the whole of it shall be before us. The excellent observations of Dr. GOOCH‡ on this disorder have been already before our readers.

The cases of inflammation of the uterus, narrated by Dr. ROBERTSON,§ of Glasgow, seem to be important. These occurred in unimpregnated females, and were characterized by bearing down pains, intumescence and an apparent retroversion of the organ. In one of these, which may be taken as a specimen of the other cases, "on examining *per vaginam*, Dr. R. found the uterus very low down, and enlarged to about the size of one's fist, the fundus being directed backwards into the hollow of the sacrum, while the mouth, which was tumid and much indurated, was felt facing the lower edge of the symphysis pubis." The whole body of the womb was so tender, that she screamed when the most trifling pressure was made on it. The pulse was small, quick, and feeble: vomiting was frequent. General and local blood-letting, pills of calomel and opium, rest, horizontal position, and semicupia, constituted the treatment; under which the patients recovered.

A singular case of pregnancy, with scirrhus of the uterus and left ovary, was detailed, in a late Number of the *Revue*

* MEDICAL REPOSITORY for November, 1822.

† Chapman's Journal for August, 1822.

‡ MEDICAL REPOSITORY for September, 1822.

§ Edinburgh Medical Journal, No. 73.

44 *Sketch of the Progress of Medicine, &c. by the Editor.*

Médicale, by M. GASC; and an account of it given in a former Number.* The patient died during *accouchement*, and the body was inspected in the presence of other medical men.

Proceeding next to the diseases of the respiratory organs, affections of the larynx have the first claim to our notice. Inflammation of this part of the air passages has been lately illustrated by Dr. J. K. WALKER† and by Dr. MARSHALL HALL.‡ The important communications of the former Physician are already before our readers: the cases by Dr. Hall have been analyzed. An instance of rupture of the trachea, by external violence, producing emphysema, collapse of the right lung, and death, has been related by Dr. LUCIUS O'BRIEN.§ In this case, it seemed "that the air blown into the cellular membrane of the neck from the ruptured trachea was at last forced into the pleural cavity, through some fissure in the pleura costalis, although none was discovered." The air was felt by Dr. O'Brien to rush out, when he made the first incision to divide the sternal cartilages on that side.

A dissection of disease of the larynx, which assumed the appearance of stricture of the œsophagus, has been published by Mr. SHAW.§ In this case, spasm of the muscles of the pharynx and of the œsophagus was evidently produced by the contact of food exciting the morbid irritability which they partook from the inflamed and ulcerated larynx. The purulent expectoration, which was very abundant, proceeded also from the ulceration of the larynx entirely. Dissection discovered no stricture in the œsophagus, nor any disease in the lungs which could account for the great quantity of expectorated matter. In another case referred to by Mr. Shaw, "where the symptoms of suffocation called for the operation of tracheotomy, it was not performed, in consequence of so large a quantity of matter being expectorated as to induce the Physician to suppose that the lungs were diseased, and that, consequently, the operation would be unavailing." Mr. S. had an opportunity of examining the body of this patient: he found the disease to be entirely confined to the larynx, the lungs being free from tubercle or ulceration.

The irritation produced by an elongated uvula has been lately pointed out by Dr. PHYSICK¶ as the cause of disease

* For September, 1822.

† REPOSITORY, Vol. XVII. pp. 1 and 266.

‡ Medico-Chirurgical Transactions, Vol. XII.

§ Edinburgh Medical Journal, No. 72.

¶ Medical and Physical Journal for September, 1822.

¶ Chapman's Philadelphia Journal, No. 8.

of the larynx, which frequently proceeds to formidable consumption. The tickling dry cough arising from this source is evidently calculated to induce or to prolong disorders of the respiratory organs, especially where a disposition to their invasion is present in the constitution. Dr. JOHNSON* alludes to three cases of this occurrence; and we have at present one under our care, wherein the irritation has evidently extended from this source to the larynx, trachea, and bronchial ramifications.

The important cases of spasmodic croup which have lately been laid before our readers by Dr. DAVIES,† tend greatly to advance our views respecting the nature of this insidious and very dangerous malady.

The very judiciously condensed memoir on the pathology of consumptive disorders, published by Dr. ABERCROMBIE,‡ has been now so long before the Profession, and its merits are so well appreciated, as not to require any particular notice in this short sketch. The works of Sir ALEXANDER CHRICHTON§ and Dr. BARON,¶ on the diseases of the lungs, &c. have just appeared. These, with the observations of Dr. Abercrombie, are reserved for future analysis.

A treatise on croup, by M. DESRUELLES, has already been noticed.¶ It contains a judicious digest of what had been previously ascertained respecting the disorder, as well as much pathological information which the author has furnished from his own research. Professor GRIMAUD** has also published a memoir on the same subject, which presents us with some original views of inflammations seated in the mucous membrane of the air passages. He appears to have extended, to these derangements, the pathological fact, which had been some time since ascertained, that inflammations of the mucous surfaces of the digestive canal are of two kinds, namely, inflammation of the follicular cryptæ, and of the membrane itself; each of which may be entirely distinct

* Medico-Chirurgical Review, No. 11.

† REPOSITORY for August, 1822.

‡ Edinburgh Medical Journal, No. 70.

§ Practical Observations on the Treatment and Cure of several varieties of Pulmonary Consumption. By Sir Alexander Chrichton, M.D., F.R.S., &c.

¶ Illustrations of the Inquiry on Tuberculous Diseases. By John Baron, M.D., &c.

¶ REPOSITORY for November, 1822.

** Journal Complémentaire, January, 1822.

from the other, although they are frequently conjoined : this last state of disease he has not, however, viewed in relation to inflammation of the trachea.*

The case of bronchial inflammation which was laid before

* Diseases of the air passages undoubtedly assume distinct characters according as either one or other, or even both these parts, become inflamed ; but we cannot agree with M. Grimaud when he refers croup to inflammation of the follicular cryptæ only. We are, on the contrary, more inclined to view this disorder to be essentially an inflammation of the mucous membrane itself, giving rise to the formation of the coagulable lymph which constitutes the productions that are so frequently generated on its surface during the course of the disorder. M. G. admits that he has often seen blood-vessels running into these false formations, as described by CHAUSSIER. This circumstance alone is a proof that the inflammation is chiefly seated in the mucous membrane itself ; and that the croupal productions arise from its blood-vessels only ; for it is quite in opposition to our knowledge of the phenomena displayed by inflamed follicular glands to infer that they could either throw out coagulable lymph, or shoot out new vessels into it, even were it shown to be formed by themselves. It is therefore justifiable, we think, from the actual state of the symptoms, and from the appearances generally exhibited after death, as well as by the rapid progress of the disease on some occasions, to infer that the inflammation, in croup, is seated primarily in the mucous coat itself, from the vessels of which the false membranes are formed ; and that when these productions are detached, which they always are if the patient live for two or three days, it arises from the increased and perhaps morbid secretion, from the follicular cryptæ, which, owing to the situation of these glands, is poured between the mucous coat and the false membrane which has been formed upon its surface ; and as the mucous secretion becomes more abundant, this membrane is the more detached by it, until it is completely separated from the surface that gave it origin. This is, in fact, the manner in which all false membranes produced on the surface of mucous textures are formed, namely, from the vessels proper to these textures ; while these membranes always are detached, owing to the excited secretion in the follicular glands, which often continues, and even constitutes the chief disorder, after these membranes are completely thrown off by it. This accounts also for the circumstance that surfaces never adhere as long as they are covered by a mucous texture, but as soon as it shall have been removed, either by ulceration or any other means, adhesion may take place. If the same action that gave rise to the albuminous exudation constituting the croupal productions shall also shoot out blood-vessels into them before they are detached, still the mucous or purulent secretion from the cryptæ will insinuate itself between the surface and these productions, and rupture any adhesion that shall have formed by means of new vessels. The mucous, or

our readers by Mr. ILIFF* seems calculated to elucidate the nature of this disorder when it assumes the acute character. The great quantity of albuminous matter constituting the false production and possessing the form of the bronchial ramifications, although not singular, is yet important as a pathological fact. A similar formation had been noticed by former writers, and TULPIUS has given a figure of one much like that furnished by Mr. Iliff.

Having now sketched the additions which have been made to our knowledge of the nature of particular disorders, and arranged them according as they are seated in the nervous, muscular, vascular, and absorbent systems, and in the digestive, urinary, generative, and respiratory organs, we proceed next, in the same synthetical mode of inquiry, briefly to notice those views which have been offered, in the period whose medical history we are now sketching, respecting those derangements which appear to influence the body in a general manner, and to disturb the functions of all the grand systems and organs of which it is composed.

We had formerly stated, that "the intimate connexion which exists between all diseases which, either at their commencement or in their course, exhibit symptoms that are really febrile, might have been less a source of error, if the phenomena by which they are characterized had been traced more accurately from the beginning, and with a stricter reference to their causes; and if the succeeding manifestations had been recognized as the effects of previous changes. Had such a course of observation been followed, deranged actions, arising almost simultaneously throughout the system, would not so frequently be mistaken for those which are avowedly referrible to one organ or part; nor would derangements of the former kind have been imputed to such a source. There is no doubt, that a certain class of causes by which the human system is influenced, will produce both local and general ailment in different individuals, according to circumstances peculiar to each; or even in the same person, owing to his state at the time of the invasion. But still the more remarkable phenomena of these

even purulent secretion, therefore, that often accompanies or follows the detached membranes, never arises from the free or unconnected surface of such membranes, but from the mucous surface itself, especially its follicles; and it is the cause of their separation, as we have just shown.

* MEDICAL REPOSITORY for September, 1822.

separate diseases proceed in a very different order, and very generally in so marked a manner as to be easily known by the most superficial observers.

“ The most frequently exciting causes of disorder, namely, atmospherical vicissitudes, exposure to cold, moisture, &c., shall, according to the state of the individual at the time of the exposure; produce an attack of general disease, unaccompanied by any symptom which can be referred exclusively to any particular organ. The disorder shall commence and terminate without any such complication. In a second individual, a more or less evident determination of the malady, or even inflammation, shall appear in the advanced course of the general disease, or only towards the usual period of its termination, or even during convalescence. In a third, the local disorder shall be co-existent, and more or less co-ordinate with the general affection, and even outstrip it in violence during its course. And, in a fourth individual, local disease alone shall be primarily produced; to which, as it increases, and as inflammation becomes more fully developed, symptomatic fever, or the general derangement, shall supervene. These modes of diseased action follow the same cause, according to the disposition or states of the system at the time. An individual, according to the above proposition, may have the first attack of general derangement, complicated with rheumatic, catarrhal, bilious, nervous, gastric, or with dysenteric affection, marking the combination of the general disorder with a heightened disease of particular organs, and constituting these varieties of fever, as they have been more particularly marked and described by DE HAEN, STOLL, REIL, FRANK, HILDENBRAND, and other writers; and as they have been observed to characterize various epidemics. Another may have the nervous, the gastric, or the dysenteric character induced in the progress of the disorder, by means of improper treatment; while a third may experience, owing to the state of a particular organ or texture, an attack of inflammation, from a similar set of causes to those which produce idiopathic fever. If, therefore, such be the varieties of disorder, which, owing to peculiar states of certain parts, organs, or of the whole of the system, supervene to one class of causes, their number must be farther increased, and their characters materially changed, according as they arise from the additional operation of climate, marshy exhalations, epidemic influence, or specific contagion. Nor do the varieties and modifications of deranged actions become only more extended by such additional causes, acting either more or less in conjunction;

but their effects are also rendered more complicated and intense."

These general positions, which are intimately connected with the etiology and pathology of fever, will be found to embrace the sum of what an extended view of its phenomena, in various climates and in different epidemics, can present.

The most interesting speculations relating to the cause and nature of fever which we have to record, have proceeded from Dr. ARMSTRONG,* to whose writings on fever the Profession has already been so much indebted. This pathologist conceives that continued and typhous fevers, as well as those of an intermittent and remittent type, originate in terrestrial exhalations: he, however, does not deny the influence of contagion in the more general dissemination of typhus, although he greatly limits its operation. He farther believes, that the remittent and continued forms of fever are complicated with inflammations of some vital texture or organ, in consequence of which they possess either of these types. This we believe to be the sum of Dr. Armstrong's opinions at present respecting fever. Similar views have been entertained by other writers, and some of them are no doubt correct, especially those which relate to the terrestrial origin of continued fever. There can be no doubt that this type of the disease is often derived from such a source, and that it is also frequently complicated with visceral inflammation in the manner which we have just alluded to; but that it is necessarily or essentially the result of either or of both, admits of discussion. We will not enter into any examination of these doctrines until Dr. A. has fully illustrated them. We cannot, however, dismiss this brief reference to them, without expressing our approval of the very candid manner in which he has stated these opinions, which, as our readers may have observed, are opposed to those which he had formerly espoused.

Dr. AUTENRIETH of Tübingen has presented us with an interesting description of a species of continued fever, which he has called the "sporadic abdominal typhus of young people."† It invades males, in preference to females, soon after the period of puberty, and is characterized by vomiting and a dull pain between the stomach and navel. It arises without contagion; and in its course, which is extremely long, it assumes nearly the same appearances as the low and insidious forms of continued fever. In Dr. AUTENRIETH's own case the complaint lasted three months. It

* Medical Intelligencer, No. XXX. May, 1822.

† Edinburgh Medical Journal, No. 72.

usually terminates by a kind of *crisis*, or rather by *lysis*. In the dissection of patients who die of the abdominal or early stage of the fever, that is, from the eleventh to the seventeenth day, "a peculiar inflammatory state of the nerves, principally those of the abdomen," is observed. This confirms the opinion which we have entertained,* that the proximate cause of fever is seated in the ganglial nerves; and as these nerves are distributed upon the blood-vessels throughout all the textures and organs of the body, that consequently all its parts are affected, to a greater or less extent, in all the varieties of fever. This species of disease appears, from the description given of it by Dr. Autenrieth, not to have been noticed in this country. Many cases of it have, however, fallen under the observation of the author's father, from whom we expect a more detailed account of its pathology and treatment.

A species of typhus fever, attended with pneumonic and peculiar symptoms, which prevailed epidemically in various parts of Virginia, has been described by Dr. LUCAS,† of Brunswick. The details are interesting, and calculated to illustrate the nature and complications of epidemic disorders. Three different accounts of a disease which prevails in certain of the western counties of the United States have been furnished by Dr. M'CALL, Dr. COLEMAN, and Dr. HAINES. Each of these writers ascribes the disorder to the eating of the milk or flesh of animals that have fed on some poisonous plant. Dr. LEA,‡ however, opposes this opinion, and makes it appear more probable that it is caused by terrestrial exhalations or malaria.

The works of Dr. PARK and Dr. LUCAS, on fever, have received from us a full review;§ and the very excellent memoir of Dr. WIGHT¶ is already before our readers.

The epidemic fever of Barcelona has called forth numerous productions on the subject, both in Spain and in France; but as their authors have left the subject in dispute in the same state as they found it, we will not occupy our limits with details which do not appear to excite any interest amongst British Practitioners, and which, as far as they have yet appeared, cannot be depended on.

Amongst the additions which have been made to our knowledge of the nature of eruptive fevers, the lucid details furnished by Dr. FORBES,¶ respecting the small-pox lately

* MEDICAL REPOSITORY, Vol. XVII. pp. 375, 376, and 377.

† Amer. Med. Recorder, No. 19.

‡ CHAP. Phil. Journ. No. 8.

§ Ibid. for June and September, 1822.

¶ Ibid. for June, 1822.

¶ Ibid. for September, 1822.

prevalent at Chichester, claim the chief attention. Dr. REED's observations on variola, varicella, and modified small-pox,* are also interesting. Dr. DAVIS, of Columbia,† has also published some remarks on the vaccine and varioloid diseases, which possess but little interest.

Dr. MACMICHAEL's "new view" of scarlet fever has been lately noticed by us. The memoir on this disorder lately published by Dr. GASTÉ‡ possesses some interest. He ascribes a decidedly inflammatory character to the disease; and for such of its forms as are of this nature his treatment is decided and appropriate. We will take an early opportunity of bringing the consideration of scarlet fever, and of some other eruptive diseases, before our readers.

Two works on epidemic puerperal fever have very lately been published.¶ Their authors contend for the inflammatory nature of the disease, and recommend nearly the same practice as Leake, Denman, Gordon, Hey, and Armstrong. The observations lately published on this disease by Dr. CAMPBELL§ are important; but, as his enlarged treatise on the subject will come under review, it is unnecessary to make at present farther reference to them.

The conversion, or metastasis of disease, is a subject which excited the greatest attention during the prevalence of the humoral pathology. The adoption of different views nearly deprived it, for a time, of the consideration which it deserved in our speculations concerning the nature of disease. More enlarged and improved opinions have now shown the importance to which it is entitled, as well as materially tended to explain the occurrence. The cases illustrative of its nature, lately laid before our readers by Dr. SUTTON,¶ will be read with interest; and similar cases may be perused in foreign contemporary journals** which have been published about the same period. The periodical works on medicine which appear in America have lately contained some excellent communications upon this interesting subject.

Two small treatises have appeared in France connected

* Edinburgh Med. Jour. No. 71.

† American Medical Recorder, No. 18.

‡ Journal Univers. des Sciences Méd. Fev. 1822.

¶ A Treatise on the Disease called Puerperal Fever. By John Mackintosh, M.D. Edin.

A Treatise on the Epidemic Puerperal Fever, &c. By William Campbell, M.D., &c. Edin.

§ Edinburgh Medical Journal for April, 1822.

¶ MEDICAL REPOSITORY for July, 1822.

** Journal Gen. de Méd. Jan. et Fev. 1822. American Medical Recorder. Journal Complémentaire, Août, 1822.

with the general principles of pathology. They both seem deficient in precision, and in the correctness of many of the opinions on which they found their views. They display, however, considerable ingenuity, and in other respects deserve a more particular notice than we can afford them at this place.* Several memoirs have lately been published in the *American Medical Recorder*, and in the *Philadelphia Journal of Medical Sciences*, which throw considerable light on the influence of the state of the fluids, and of sympathy in the production and cure of disease. Dr. MARIA-GELCEN's observations† on the latter of these subjects deserve notice, although they are deficient in sound views respecting several matters which he endeavours to elucidate.

The very excellent paper of M. BRESCHET,‡ on a singular morbid degeneration of the animal secretions and tissues, and his speculations on its nature and origin, deserve the attention of all who are interested in pathological research.||

PART II.

ANALYTICAL REVIEW.

1. *Remarks on the Comparative Health and Population of England at different Periods:—Dissertation Fifth of "Select Dissertations on several Subjects of Medical Science."* By Sir GILBERT BLANE, Bart. F.R.SS. Lond. Edin. and Götting., Member of the Imperial Academy of Sciences of St. Petersburg; and Physician to the King. Now first collected, with Alterations and Additions, together with several new and original Articles. Lond. 1822. Pp. 398.
2. *Abstract of the Answers and Returns made pursuant to an Act passed in the First Year of the Reign of his Majesty*

* *Inductions Physiologiques, Pathologiques, et Thérapeutiques, &c.* Par J. F. Caffin, M.D. Paris, 1822.

De l'Anatomie Pathologique en général, &c. Par H. J. Scoutetten, D.M. Paris, 1822.

† *Journal Complémentaire*, Avril, 1822.

‡ *Journal de Physiologie*, No. 4.

|| The other arrangements of the Journal oblige us to defer the remainder of this sketch until our next Number.

King GEORGE IV., intituled, "An Act for taking an Account of the Population of Great Britain, and of the Increase or Diminution thereof." 1821. Ordered by the House of Lords to be printed 10th July, 1822. Pp. xxxv. and 711.

ALTHOUGH the progressively increasing state of the population in this country may be apt to create alarm in the mind of the political economist, lest there should not be a commensurate increase of food and of clothing produced by the agriculturist and manufacturer, — the conviction that the diminished mortality has been very much brought about by our improved mode of treating diseases, and by the efficient means adopted by way of prophylaxis, and of preventing their extension, cannot but be highly gratifying to the Physician.

The first actual enumeration of the inhabitants of this country was made in the year 1801, which gave to England and Wales a population of 9,168,000, and a mortality of 204,434; that is, 1 in 44.8. The second was made in 1811, and gave a population of 10,502,900,* and a mortality of one in 50. And the third and last, which took place in 1821, has given an enumeration, according to Mr. RICKMAN, (who was appointed by his Majesty's Principal Secretary of State for the Home Department to digest and reduce into order the population returns, and by the Privy Council to arrange the parish register returns,) of 12,218,500, and a mortality of one in 58, being an increase over the last census of 1,715,600, — a number more than equal to the whole population of England, exclusive of Wales, at the Norman conquest, and probably greater than that of England, exclusive of Wales, three hundred years afterwards.

In order to give a *coup d'œil* of the relative shares which the different counties of England and Wales possess in this increased population and diminished mortality, we subjoin a table, collected from the last enumeration and parish register abstracts, which also contains a comparative account of the longevity of the different counties.

* Considerable discrepancy will be observed between the calculations given here and those of Sir Gilbert Blanc; the estimates which we have adduced, it is but justice to ourselves to observe, were taken from the last *Population Abstract*, and are consequently more to be depended upon. As an example of the arithmetical errors contained in Sir Gilbert's Essay, the census of England and Wales for 1811 is stated to be 10,488,000; and that of 1821, 11,977,663, — the "latter being an increase over the former of 1,827,048"!!!

ENGLAND AND WALES.

COUNTIES.	POPULATION:		ANNUAL PROPORTIONS.				LONGEVITY	
	In 1811.	In 1821.	One Burial to (1811)	One Burial to (1821)	One Baptism to	One Marriage to	90 to 100 (in 20,000)	up (in
Bedford	72,600	85,400	56	62	36	131	6.71	
Berks	122,300	134,700	53	58	34	145	11.46	
Buckingham	121,600	136,800	49	56	35	144	9.41	
Cambridge	104,500	124,400	44	58	32	126	4.71 m	
Chester	234,600	275,500	50	55	36	136	9.55	
Cornwall	223,900	262,600	62	71	34	151	10.09	
Cumberland	138,300	159,300	54	58	34	154	18.42	1
Derby	191,700	217,600	56	63	35	153	9.48	
Devon	396,100	447,900	58	61	32	127	12.10	
Dorset	128,900	147,400	57	66	36	154	18.72	
Durham	183,600	211,900	50	55	34	143	21.79	1
Essex	260,900	295,300	44	59	35	150	7.76	
Gloucester	295,100	342,600	61	64	37	119	10.55	
Hereford	97,300	105,300	58	63	38	170	15.95	
Hertford	115,400	132,400	55	58	34	179 m	5.94	
Huntingdon	43,700	49,800	48	63	35	132	8.35	
Kent	385,600	434,600	41	50	31 M	130	7.76	
Lancaster	856,000	1,074,000	48	55	32	126	6.72	
Leicester	155,100	178,100	57	59	36	133	7.23	
Lincoln	245,900	288,800	51	62	32	138	11.11	
Middlesex	985,100	1,167,500	36 M	47 M	38	106 M	6.04	
Monmouth	64,200	72,300	64 m	70	47 m	154	17.46	
Norfolk	301,800	361,300	50	61	33	136	14.21	
Northampton	146,100	165,800	52	58	36	134	6.96	
Northumberland	177,900	203,000	53	58	38	145	24.70 M	1
Nottingham	168,400	190,700	52	58	33	133	8.70	
Oxford	123,200	139,800	55	61	35	153	10.66	
Rutland	17,000	18,900	53	62	36	148	13.00	
Salop (Shropshire)	200,800	210,300	57	58	35	155	12.69	
Somerset	313,300	362,500	52	63	37	149	9.64	
Southampton (Hampshire)	253,300	289,000	49	58	32	117	9.82	
Stafford	304,000	347,900	52	56	32	123	10.30	
Suffolk	242,900	276,000	53	67	35	139	11.45	
Surrey	334,700	406,700	45	52	40	148	9.40	
Sussex	196,500	237,700	55	72 m	33	151	6.87	
Warwick	236,400	280,000	42	52	37	123	9.07	
Westmoreland	47,500	52,400	54	58	35	155	10.09	
Wilts	200,300	226,600	54	66	37	145	9.97	
Worcester	165,900	188,200	52	56	34	143	10.15	
York, East Riding	173,000	194,300	47	57	33	127	8.60	
Ditto, North Riding	171,100	187,400	51	63	36	151	20.48	
Ditto, West Riding	675,100	815,400	51	61	35	131	7.43	
ENGLAND	9,870,300	11,486,700	49	57	35	133	9.90	
WALES	632,600	731,600	60	69	41	156	17.97	
	10,502,900	12,218,500	50	58	35	134		

N. B. M signifies the maximum, and m the minimum proportion in the tables.

WALES.

COUNTIES.	POPULATION.		ANNUAL PROPORTIONS.				LONGEVITY.	
	In 1811.	In 1821.	One Burial to (1811.)	One Burial to (1821.)	One Baptism to	One Marriage to	90 to 100 (in 20,000)	100 and upwards (in 20,000)
Anglesey....	38,500	46,000	72	83	41	146	9.58	
Brecon	39,000	44,500	54	67	53	158	21.44	1.40
Cardigan....	52,000	59,000	73	70	40	159	14.49	1.03
Carmarthen..	79,600	92,000	62	67	45	142	20.19	.64
Carnarvon ..	51,000	59,100	67	69	38	149	16.92	.34
Denbigh	66,400	78,000	52	62	37	154	21.53	
Flint	43,100	54,900	53	64	34	190	14.30	
Glamorgan ..	88,000	103,800	53	69	43	158	17.93	.83
Merioneth ..	32,000	35,100	62	67	45	163	20.73	
Montgomery.	53,700	61,100	63	65	38	160	14.81	.35
Pembroke ...	62,700	75,500	64	83	47	159	26.88	1.51
Radnor	21,600	23,500	56	64	36	159	16.90	
TOTALS ..	632,600	731,800	60	69	41	156	17.97	.50

N. B. The two columns under the head of Longevity show what would be the number of persons of the specified ages, supposing (for the sake of comparison) the number of males whose ages were returned from each county to have been 10,000, and the number of females to have been 10,000 respectively.

The increase of population and comparative longevity in the different shires of SCOTLAND, during the last ten years, are as follows:—

SHIRES.	POPULATION.		LONGEVITY.	
	In 1811.	In 1821.	90 to 100 (in 20,000)	100 and upwards (in 20,000)
Aberdeen	139,600	158,500	19.02	1.39
Argyle.....	88,400	99,300	29.84	.83
Ayr	107,400	129,800	15.05	.15
Banff	37,900	44,400	15.55	
Berwick	31,800	34,100	11.33	.57
Bute	12,400	14,100	14.54	
Caithness	24,200	30,800	11.71	.62
Clackmannan	12,400	13,500	5.22 m.	2.54
Dumbarton	25,000	27,900	22.58	.78
Dumfries	65,100	72,300	12.06	.57
Edinburgh	133,600	193,300	5.65	.81
Elgin	29,000	31,800	18.00	.70
Fife	104,600	116,800	9.17	.19
Carry forward	831,400	968,600		

SCOTLAND CONTINUED.

SHIRES.	POPULATION.		LONGEVITY.	
	In 1811.	In 1821.	90 to 100 (in 20,000)	100 and upwards (in 20,000)
Brought forward	831,400	968,600		
Forfar	110,800	115,700	12.00	.54
Haddington	32,200	35,800	17.48	
Inverness	80,900	92,000	32.49	6.59
Kincaidine	28,400	29,700	15.85	.68
Kinross	7,500	7,900	7.61	
Kirkcudbright	34,800	39,700	19.16	
Lanark	198,100	249,300	7.24	.56
Linlithgow	20,100	23,100	13.03	
Nairn	8,500	9,200	12.75	
Orkney and Shetland.....	47,700	54,200	9.22	1.21
Peebles	10,300	10,200	13.91	
Perth	139,600	141,800	13.05	.27
Renfrew	96,100	114,400	10.11	.91
Ross and Cromarty	62,900	70,200	34.39 M.	9.22 M.
Roxburgh	38,500	41,700	10.31	.46
Selkirk	6,100	6,800	20.60	
Stirling	60,300	66,700	11.91	
Sutherland	24,400	24,300	10.11	
Wigtown	27,800	33,900	19.26	1.26
TOTALS	1,865,900	2,135,300	14.13	1.03

It is by no means an easy matter to account for the great difference in salubrity which exists in the different counties, particularly in Wales, the mortality of which is so very much less than that of any equal number of English counties; locality is, however, without doubt, the most important agent: for it cannot be supposed that the Cambrians are better acquainted with the means of preserving health than their neighbours, or even, if more acquainted, less prone to commit those excesses which have been considered to be detrimental to health.

By Weyland, and other political economists, great towns have been called the *graves* of mankind; but they are now comparatively the abodes of health and longevity. Thus the annual mortality of London, in 1700, was one in 25; in 1750, one in 21; in 1801, and the four preceding years, one in 35; in 1810, one in 38; and, in 1821, one in 40. "The increased mortality," says Sir Gilbert Blane, "in the middle of the last century, has been imputed to the great abuse of spirituous liquors, which was checked about that time by the imposition of high duties. The other causes of superior health seem to

consist in a general improvement in the habits of life, particularly with regard to ventilation and cleanliness,—a more ample supply of water, particularly since the new water companies began to supply the town,—greater abundance, and better quality of food,—the improved state of medicine, and the better management of children,—to which we may add, the influence of *vaccination*.

An analogous improvement in salubrity has occurred in the other large towns of the kingdom.

The following table, given by Sir Gilbert Blane, who was indebted for it to Mr. Finlaison, “one of the most able calculators of this age,” will show the great improvement which has taken place in the laws of mortality between two periods; and the reader will readily see, that if the table were calculated according to the last census, the probabilities of life at the present period would be still greater.

AGES.	Mean Duration of Life, reckoning from		So that the Increase of Vitality is in the In- verse ratio of 100 to
	1693.	1789.	
5	41.05	51.20	125
10	38.93	48.28	124
20	31.91	41.33	130
30	27.57	36.09	131
40	22.67	29.70	131
50	17.31	22.57	130
60	12.29	15.52	126
70	7.44	10.39	140

The increased salubrity of the community will readily account for the extraordinary increase of population within the last twenty years. The same circumstance will likewise show the immense advantages which all insurance offices must be deriving from the better order of things, and the impropriety of tables of several years' date being considered authority for the present general average of life.

With regard to the general increased salubrity, it is difficult to assign any adequate causes; we think it probable, however, with Sir Gilbert Blane, that “they are chiefly referable to the more ample supply of food, clothing, and fuel; better habitations; improved habits of cleanliness and ventilation; greater sobriety, and improved medical practice.” Which of these is the most effective agent, it is perhaps difficult to say.

In a future Number we shall most probably recur to the
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subject of mortality, as it regards this metropolis in particular. In conclusion, we feel a heartfelt satisfaction in agreeing with Sir Gilbert Blane, that "if health and long life are to be admitted as the surest criterions and constituent elements of human happiness, it would appear that we have much reason for self-congratulation in having had our lot cast in this age and country."

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

La Médecine Légale, relative à l'Art des Accouchemens, &c. &c.

Law Medicine, as it relates to Midwifery. By J. CAPURON, M.D., Professor of Midwifery, &c. &c. Paris, 1821. 8vo. pp. 521.

FOR the volume now before us we hold the Profession to be much indebted to the distinguished author. Obstetric writers have not done justice to the subjects of which it amply and ably treats—nay, in certain voluminous works, even of recent appearance, many are but incidentally noticed, and some which are of the highest importance are passed over in silence. We shall not stop to animadvert upon the practice of teachers in neglecting the relationship of their respective branches to the jurisprudence of the country; nor to exhort our readers to study Forensic Medicine. It is rapidly finding its own way into their necessities; and we are happy to observe the increasing assistance that is coming to their aid. Whenever the Profession chooses, or (to speak with more conformity to the apparent progress of affairs) whenever they are driven to study this science, they will be at no loss for means, even in the English language.

The truly excellent work of Dr. Gordon Smith on Forensic Medicine is a guide to which they may implicitly trust in all matters connected with this department of medical knowledge; and the learned and complete treatise of Dr. Hutchinson, on one of the subjects embraced by this review, will furnish them with a mass of information respecting it. These productions have been sufficiently long before the medical public, to render it a matter of surprise to us, were we to

hear of any Practitioner giving evidence before a jury, while he remains in ignorance of the sentiments which these works contain.

We seize with avidity the opportunity which the production now before us furnishes, of directing the attention of our readers to matters which have lately, and, indeed, now are engaging the researches of individuals eminent in our Profession. And we confess we enter upon the subject with the consciousness, and with some degree of exultation, that the opprobrium, to which, until lately, the medical literature of our country was liable, has already been entirely removed.

Our object, in the present instance, will be to examine the contents, and weigh, in some degree, the merits of a work, which professes to treat of certain highly important questions belonging to Forensic Medicine. The term MIDWIFERY belongs to the art of managing labours; or, in a more extended sense, as it is now universally understood, it embraces also the treatment of women in complaints connected with the peculiarities of their economy, and even the cure of infantile disorders. There are occasions, arising out of all these, upon which the opinions of medical Practitioners are required in courts of justice; and although many members of the Profession do not meddle with the stricter duties of the midwife, all are alike liable to such requisitions, and should be equally able to act when called upon.

There is hardly any branch of medical science which has not bearings of the same kind. Connected with what is termed the *practice of physic*, and also with that of surgery, there is a multiplicity of points on which such opinions are ever and anon called for; and though, almost in the days of yore, ponderous folios were put forth upon these questions exclusively, we have now before us a volume devoted to a portion of them only, which, upon the whole, does not contain more than is necessary.

Referring, in the preface, to his former works on Midwifery, to which the present is a kind of supplement, our author observes, "that all the preliminary ideas concerning the female and the infant may be useful, even absolutely indispensable, when obliged to examine and judge the medico-legal questions of deforation, rape, pregnancy, superfœtation, delivery, viability, suppressed, premature, or retarded births, abortion, and infanticide—questions in which the honour, the fortune, and the life of individuals, the happiness of families, and the peace of society, are concerned. But these ideas were too scanty, too insulated, too vague, and even too general, in the works in which we have inserted them, to

form a body of medico-legal doctrine relative to the art of midwifery," &c.

We shall not stop to sketch the plan adopted by M. CAPURON, but pass at once to the interesting matters treated of, with the hope of giving prominence to that most important, and, in our opinion, most misconceived, of all the subjects here enumerated, viz. the murder of new-born children. With this intent, we shall pass over part the first entirely, which relates to the law of France concerning the several topics.

The second part, which forms the bulk of the volume, is divided into sixteen questions. The two first relate to the violation of females; which he separates into *defloration* and *rape*. This is by no means a distinction without a difference; for by the former is meant the ravishment of a virgin; and (though perhaps no greater a moral crime than the same outrage perpetrated on a female of impure character) is connected with a difference of physical circumstances, both in the nature of the injury and the means of proof. These subjects are treated of to a sufficient extent, and in a judicious, unexceptionable manner; but we do not see that any additional light has been thrown upon them, calling for particular consideration at present.

The third question is that of *pregnancy*. Practitioners are so frequently required to verify the supposed existence of this state, when it is either a desired event, or at least one to which no judiciary importance is attached, that we must suppose them fully qualified to establish or disprove its existence on all occasions. A female may either be under suspicion of pregnancy, and thereby suffer in her reputation; or she may be desirous, for various purposes, to be believed to be in that state. To a Practitioner properly qualified, there cannot, one would think, be a great deal of mystery in such a case; or, if circumstances should exist which may lead him to doubt, a little delay must place the matter beyond all uncertainty. Nevertheless, the greatest mistakes have occurred; and occasionally in the hands of the most eminent in the Profession. M. Capuron divides the subject methodically, and discusses it with great caution. He first treats of equivocal, and then of certain or positive signs of pregnancy. These are so common-place, that we shall not quote the enumeration. Nor shall we dwell on the subjects of false and extra-uterine conceptions. There are several other discussions on points, which, though not altogether of curiosity, do not frequently come before the public, at least in this country. In the private experience of Practitioners of Midwifery on a large scale, there must be frequent calls

for their opinion in these matters; and it is their duty to be thoroughly acquainted with them. The tricks which are resorted to in order to conceal pregnancy, where it is illicit, and to induce Practitioners to treat the female for some other complaint, in the hope, on her part, that the medicines may have the effect of throwing off the contents of the womb, require a deeper acquaintance with this subject than is to be learnt from merely studying the ordinary phenomena of gestation.

On the subject of depravations of appetite as a mark of pregnancy, we have some ridiculous stories that might as well have been left out. Their application is remote indeed. We cannot, for instance, see any necessity for discussing the question, whether a woman should be hung for killing, salting, and eating her husband? If she did conceive such an appetite by means of a gravid uterus, we can only say that pregnancy drove her mad; and there is provision made by law for the disposal of maniacs. True it is, as M. Capuron says, that a criminal desire leading to such enormity might be hidden under the pretence of a *depraved appetite*; but in the only judiciary trial of the kind that we remember, and which occurred very lately at one of the British settlements on the coast of Africa, the excuse was diametrically opposite. The crime, indeed, was not perpetrated by a woman; but, in cases of such a nature, we need not be very nice about that difference in drawing an illustration*.

In the next question, we find our author ranking himself among the advocates for superfœtation. He lays stress upon an opinion favourable to the doctrine having been entertained by men of great names—an argument we should not in these days have thought likely to be used, especially on a subject connected with the economy of internal organs, about which so much fancy is displayed in the writings of these very men. He begins with Hippocrates, Aristotle, and Pliny, “who have no doubt on the subject,” and ends with Brassavole, who has quoted occasions on which superfœtation was epidemic! Upon this subject M. Capuron has by no means confirmed our wavering faith as to the truth of this matter.

* A negro was lately tried at Sierra Leone for killing and eating his companion. The excuse was given in a way the more shocking, as it was contained in the answer to a question, whether the prisoner approved of one of the jury? “O yes,” said the poor wretch, alluding evidently to the transaction for which he was placed at the bar, “me like him too much—me catch him, me eat him.”

Question fifth relates to *delivery*. Here we have a story (which, if it related to an Englishwoman, would at best be a very silly one,) of a girl who had admitted her lover to the last familiarities, under the persuasion that he would marry her; but, finding him in no hurry to perform his promise, feigned pregnancy, and a happy accouchement. The first part of the play was performed, of course, by means of clothes, pillows, &c.; and, in the last act, the machinery and properties were made up of a bed soiled with bullock's blood, a confidential friend in the character of attendant, a regular period of puerperal convalescence, and the pretended disposal of the child at nurse. In the sequel, the man brought her into a court of justice to account for the child, which she did by having herself inspected by our author and others, who could find no sign of delivery about her, old or new.

M. Capuron gives us an enumeration of the signs of the presence of labour; which are, of course, carefully taught by all obstetric lecturers. To ascertain whether a female has been brought to bed or not, can hardly ever be required but in a case that savours of concealment, and probably of crime. For some time after delivery, there can hardly be a danger of mistaking the truth of the matter. Events, however, have been recorded, where a decision in the affirmative has been founded on similarity of appearances caused by disease. Ovarian dropsy has been mistaken for pregnancy, and the consequence of sudden evacuation for proof of parturition. After a few days from the event, though in most cases the careful and skilful examiner may have strong reason to believe in the pre-existence of pregnancy, his evidence to that effect could hardly be satisfactory in a case of legal investigation. M. C. considers the tenth day as the medium period beyond which the return of the parts to their natural state renders the fact of delivery undiscoverable, and hinders the distinction between a recent and a remote event of that nature. He quotes several cases where delivery took place without consciousness on the part of the mother; but, upon the whole, the question is treated in a manner that gives the impression of prolixity.

The title of the next question can only be given in a circumlocutory manner. It relates to the survivor, when the mother and infant both perish in child-bed. It may arise where both are found dead after a solitary labour, or where the Cæsarian section is performed on the dead body of the mother, and the fœtus is found dead in the womb. The object to be adjusted in such cases is the inheritance of property; and various litigations have turned upon this

point. We are not aware, however, that British jurisprudence would have to trouble the medical Profession in such cases as those alluded to. By the law of tenant by courtesy, a child cut out of the mother's womb cannot give the title in question, inasmuch as it must be *born secundum naturam*; and we believe that no practical application of any rules has yet been called for in regard to the first case. We consider the illustrations introduced by our author as meriting attention; but we must either quote them at large, or pass them entirely over. We have not space to do the first, and are compelled to observe the alternative; for any remarks we might make upon them would occupy even more room than the original. Indeed, if we transferred these to our pages, we could hardly let them pass without comment.

The seventh question treats of *viability*; by which, in the words of the author, is meant, with regard to a child when born, "the possibility of living completely, and as long as men do in general; that is to say, of becoming an adult," &c. In fewer terms, we might say, *its capability of being reared*; or, in one word, its *rearability**. In the work before us, the importance of this question also is founded on the French law of inheritance. But there is a very grave case in which it may be applied among ourselves. It may (as we shall afterwards show) be urged in favour of a woman accused of child murder, that the *foetus* was not *viable*—that it came into the world at such a period of gestation, as to make it more than probable, if not certain, that it could not have been born alive; or if so, that it could not support life, for any space of time, separated from the maternal organs.

In few words, the fact (as established by observation of numerous cases where facilities of every kind enabled Practitioners to ascertain the age of the *foetus*) is the following:—As far as the regular course of utero-gestation alone is concerned, no *foetus* coming into the world before the termination of the fifth month of pregnancy can be born alive; and no *foetus* produced during the two following months, though it may come into the world alive, can be reared. In proportion (it would seem) as its epoch is nearer the fifth, or the seventh month, it will exist for a shorter or longer period; but we apprehend there is scarcely a well authenticated fact of a child born under the seventh month approaching maturity.

* At page 195, M. Capuron derives the word *viability* from the Latin *via*; according to which, says he, "the child might live for some hours, or even days, after birth, as it lived in the womb of the mother, without, however, on that account being *viable*, or able to run the career of life."

From that time to the full termination of the ordinary period of human pregnancy, particular causes will operate in particular instances; but nature seems to have given the two last months the privilege of producing offspring capable of supplying the casualties in society.

Such conclusions are not much contested in this country. But many indeed have been the occasions elsewhere, on which great disputes, and absurd decisions, have taken place. From the time of Hippocrates to a very recent period, an opinion was prevalent, that a child born at the eighth month was not so viable as one produced at the seventh; and great space is occupied, in all the earlier writers on medico-legal science, with the birth of children from almost the first month of pregnancy down to the thirteenth, and even to later dates from the assumed period of conception—nay, some of them have gravely inquired into the possibility of a birth taking place at the distance of years! Tribunals have also declared, that children born at periods far removed both ways from the ordinary time were legitimate, and entitled to all the advantages of rank and inheritance of parentage. With regard to the impossibility of rearing a child at the eighth month, it is quite unnecessary to offer any remark. Were we addressing ourselves to those who are not of the Profession, we should say, that the nearer the child reaches the full period of nine months it has the greater chance of prospering; and, therefore, that an eight months' birth is better than a seventh. M. Capuron, however, is at some pains to disprove the mistaken notion we have just alluded to.

But in the practical application of the question of *viability*, it is necessary that there should be some means of judging what is the fact in any particular case. It is perhaps rare that we can depend upon information from any woman as to the date of her impregnation or conception. It can only, therefore, be by acquaintance with the progress of the foetus, or the successive stages of its development within the womb, that an opinion can be hazarded, at its separation, whether it can support an independent or extra-maternal existence. The details of this progress are so well known, or so easy of access, that we need not follow the very particular account given by our author. While, however, he concludes that we cannot always pronounce with accuracy respecting the viability of infants from their structure, volume, dimensions, and weight, he considers the inference to be drawn from the centre of the body, as to its length, more to be depended on. Thus, in the early part of pregnancy, the middle is said to be very near the head; and extends downwards, until, at the full period, it is exactly at the navel. But, as there is no rule

without exceptions, so we have found some with regard to this. We are inclined to think, however, that, in their length, fetuses do not exhibit such discrepancy as in their weight; and the above observation (for which we rather think we are indebted to M. Chaussier) may be easily confirmed or refuted.

Our author now enters on the consideration of what should be received as evidence of life in these cases. He lays much stress upon the distinction between foetal or intra-uterine existence, which the offspring enjoys in common with, or (so he expresses himself) as a *parasite* of the mother, and the extra-uterine and social existence proper to itself. We regret that want of space prevents us from quoting the whole passage illustrative of this doctrine; * for it has been matter of inquiry in an English court of justice, and a decision was given, upon the evidence of two highly respectable and learned Physicians, as to the vitality of a new-born infant, which the opinions of M. Capuron do not countenance. † We shall content ourselves, however, with a very short passage, from page 186:—

“We have remarked above, that the vitality of an infant, after birth, is established by the fact; but it may occur that the fact is a subject of dispute, either from having been ill observed, or from having been attested by incompetent witnesses, or those liable to deception of the senses. Thus certain *automatic* movements have been considered signs of life—as a slight tremor of the eye-lids or lips, contraction or extension of the limbs; when such movements took place in dead bodies, or in infants yielding their last breath. We are also aware of the effects of galvanic influence, of muscular contractility, or of the action of the air which finds its way into the cavities after death,” &c.

M. Capuron goes on to apply this question to the case of monsters. Here we do not feel ourselves called upon to follow him. Though unnecessarily minute, he has not imitated the absurdities of many of his precursors who have written on the subject. In Great Britain the question is confined to narrow limits. Whoever destroys human off-

* From page 176, and onwards.

† This took place in the cause of *Fisher v. Palmer*, tried in the Court of Exchequer in the year 1806; on which occasion the opinion of the late Dr. Denman was opposed to that of Dr. Haighton and Dr. Babington. Dr. Gordon Smith has made use of the case in his very excellent work on the Principles of Forensic Medicine, and seems to view it according to M. Capuron's mode of thinking.

spring commits homicide;* and beings not possessed of the reasonable powers of humanity must be cared for, without taking into account the intermediate question of bodily redundancies, deformities, or defects. As to ambiguities of sex, we hear of them as matters of curiosity; and our ideas on the subject are, we believe, sensible and correct. Little or no confusion is to be apprehended here with regard to pretended hermaphrodites.

He next takes up the question of premature birth, which we shall pass entirely over. Indeed the subject has been, in a great measure, anticipated. To it succeeds, in due order, the consideration of retarded births—or the possibility of children being carried in the womb longer than nine months—or the legitimacy of children born more than nine months after the death, departure, or separation of the reputed father from intercourse with the mother. We believe the opinions of British Practitioners on this subject to be very uniform, and that there is no need to imitate the example before us, by going at length into the investigation of the question. Beyond the tenth month we cannot allow of natural uterogestation; though we know an instance of a married lady, living with her husband, who, according to her own reckoning, carried her third child thirteen months, and had a happy delivery. We all know how little reliance, in many cases, can be placed on women's own reckoning—how completely fallacious sensations often are; and also that (dating from the state of the catamenia) a miscalculation of nearly a month may take place either way. Nature, likewise, we certainly think ourselves bound to believe, is not so fastidious an economist as to work by the hour, or even by the day; and a few days may be *added* to the ordinary period, as well as *subtracted* from it. As we cannot tell why a child should be expelled from the uterus at the ninth month, we might be asked why it should not remain there for any length of time? We would answer, by saying, that the general and almost undeviating course of nature must be the foundation of rules, and that the subjects of, or parties concerned in, exceptions, must reconcile them in the best way they can. The declarations of tribunals and faculties are of themselves no proofs, in the estimation of physio-

* At York Assizes, in 1812, this doctrine was held by a learned judge, on the occasion of two women of good character being tried for drowning a monstrous birth, of such a nature that it was not likely to live.

logists; nor can we alter the established course of nature, however honourable it may be to think with the great, or comfortable "in verba magistri jurare." We have a collection of stories here in favour of ladies carrying children *ad libitum*; but we trust we shall not be accused of prejudice, when we express our disappointment at not finding one of English origin. Probably this may arise from the paucity of our literature in law medicine; but we think the subject of human pregnancy has been well enough attended to among us. "If the question," says M. C. "of tardy births should even still be a bone of contention among the doctors, it can no longer be so among the lawyers; for the law has now fixed the three hundredth day after presumed conception as the fatal and absolute term that must necessarily remove all these difficulties." When will the British legislature favour us with a few acts of parliament, which, if not required in this case, would be so advantageous to the sciences in many others?

The next question relates to the signs of life or death of the *fœtus in utero*; by which is here to be understood, not only the obstetric case where the *fœtus* is yet unborn, but the legal one that may, and frequently does, occur after the birth of a child deprived of life—whether the subject died in the womb or not. Of the bearings of the former we need not enter upon discussion; and although our author appears to pave the way for the consideration of infanticide by this and several other questions of a preliminary nature, we shall not follow him, but, passing by the signs derivable from the state of the parent, and merely observing that a short enumeration is given of the marks by which Practitioners are generally guided when examining the body of the *fœtus*, we shall hasten to the succeeding topics.

The eleventh question relates to the *exposure of new-born children*; in deciding which, our author mentions the following circumstances as those which demand attention:—1st, If the woman accused has really been pregnant; 2d, If she has been recently delivered; and 3d, If she has been delivered of the identical child in question. For the elucidation of which, he refers to the questions that follow.

With regard to *suppressed birth*, he says that the question, in its simplest form, consists in ascertaining whether the child concerned in it belongs or not to the woman accused; and here the threefold investigation just mentioned is to be gone through. After our author has detailed, with great minuteness, the particulars to be inquired into with regard to a woman's conduct during a pregnancy (till now unsuspected), he relieves us of the difficulty, by saying, that "all

these researches are rendered useless and superfluous, when it can be ascertained that the woman has been newly delivered." "But," says he, "if the woman, on her part, can produce another child, and prove that she has been delivered of that, it is evident that she is not guilty. There could be no difficulty in such a case unless she had been delivered of twins, and had preserved the one while she had exposed the other." This looks like wire-drawing. The means to be resorted to for ascertaining the identity of the child, is "*to confront*" the child with the mother; or, in other words, compare the state of the one with that of the other, as to the length of time that the appearances observed in each may have been present.

Both under this head, and on a former occasion, it will be recollected that M. Capuron limits the period after delivery, during which any available inspection of the woman can be made, to the *tenth* day. Here he infers, that after the fifth or sixth the precise age of the child is not so easily ascertained. At this period the navel drops; and the general conclusion to be drawn is, that where a child still possesses the remains of the cord, and the woman shows no signs of recent delivery, or where these signs are evident, while the child has passed the period in question, the matter is more than doubtful—and here, we apprehend, the business of the medical man ceases. As to Hippocrates, Aristotle, and Galen, with their "presumptions" founded on personal resemblance, we may excuse them from coming into court.

The counterpart of the foregoing question is the "*substitution*" of a birth, or, in plainer English, a *pretended* one. This and the former case differ only in the motives of the performer; and with these we have nothing to do. M. Capuron recites various circumstances, to which, in the management of such an investigation, authorities will do well to attend; but the part of the medical witness must be confined to the points already considered.

He next treats of *paternity*, *maternity*, and *filiation*. The vulgar adage says, "he is a wise man who knows his own father;" and many sage heads seem to have been now and then at work to accommodate claimants with a sire. A case is quoted here from old Zacchias, where one man applied to the Roman tribunal to be assigned to another, who had become second husband to his mother. The judges, "after collecting the opinions of physicians, philosophers, and civilians," decreed against him; because, being now aged, and having come into the world at the fifth month after this second marriage, he could not have been *viable*, had he been conceived *after* that union had taken place. We are sorry

the court should have been put to so much trouble, which probably would not have happened had the celibatarians (of whom we must suppose all such tribunals in the Holy See to have been composed) been aware of the possibility of conceiving *before* marriage, and had they chosen to adhere to a principle which certainly prevents great confusion, viz. "*pater est quem nuptiæ demonstrant.*" With regard to pater-nity, where *nuptiæ* are not concerned, the practice at Bow Street, and elsewhere in this empire, is wonderfully simple, and very generally understood.

The two remaining questions are designated *abortion* and *infanticide*. M. Capuron treats of them in the order which should always be observed, though, in some works on forensic medicine, the latter is not only placed before the former, but other questions are interposed. Of course, we suppose our readers aware, that abortion, as a disease or mischance, is not the ostensible matter of inquiry. We have to consider its pathological connexion with crime. This question, therefore, has very generally been designated *criminal abortion*. It is, in fact, a topic inseparable from that of the murder of new-born children, termed *infanticide*; for, the intent being the same in either, the difference in the criminal act mainly depends on the circumstances under which it is committed—the principal of these being the period of utero-gestation at which it is done. Abortion is an affair of the early, and infanticide of the latter, months of pregnancy.

It has been already observed, that under the fifth month no fœtus can be born alive; and that, from this period to the completion of the seventh, even living offspring cannot maintain a separate existence. We shall not yet investigate the propriety of fixing upon either of these periods as the proper boundary between abortion and homicide; * but shall merely assume that the distinction is well founded, and express our approbation of the one question being treated as introductory to the other. Nay, we shall venture a step further; and, declaring them to be parts of an entire subject, contribute our mite towards precision of medico-legal science, by submitting a word significative of the two questions. We trust that *prolicide* † will not be objected to.

* The term *homicide* is to be understood here in the sense implied by it in our law-books—the killing of a person at whatever period; of which, therefore, *infanticide* is but a modification, though a very peculiar one. *Abortion* does not come under the same designation.

† The word, i. e. *prolis occidium*, may have been previously used, but we have not met with it; and we conceive it equally admissible

It may, however, be urged, that the distinction should be confined to either destroying the child *within the womb*, or *after it is born*, without fixing a period of pregnancy at which the one view of the matter is to cease, and the other to begin. To this we shall merely answer, at present, that by *feticide* may conveniently be understood, the destruction of the offspring *by separating it from the mother* — by causing the uterus to throw off its contents, while yet death must be the result to the foetus; and that infanticide must be understood to be the murder of a child coming into the world, at whatever period of pregnancy it may have been born, or by whatever cause it may have been separated from the womb. As we proceed, we trust that we shall clearly develop our own ideas on the subject, while endeavouring to do justice to M. Capuron — to whom it is time to return.

Feticide. — The law of this country has provided the punishment of transportation for fourteen years, where medicines, &c. have been administered, with intent to procure the miscarriage of a woman *not quick* with child. After the period of quickening, the same offence is punishable with death.

Among the vulgar there is still a prevalent notion, that until the quickening of the foetus there is no *crime* in causing its expulsion from the uterus. This opinion was once so far countenanced by philosophers, that they did not consider the embryo to be possessed of humanity, or hominical existence; until this took place. The question is now no longer agitated. Quickening is, on all hands, allowed to be but a sign of development, or increase on the part of the living foetus, and the accompanying enlargement of the uterus. We need not therefore stay to argue this point; still less dare we assume the office of commentators on the statutes of the country; but, as the ignorant and unfounded persuasion, just alluded to, might be considered to receive countenance from the distinction above quoted, it is perhaps allowable to conclude, that the law contemplates the doubt or impossibility of proof, as to the vitality of the embryo at an earlier stage of pregnancy.

We agree with our author that the occurrence of abortion cannot be criminally charged upon a woman who may be the subject of it, when it can be proved that she was not aware of her being pregnant. Nay, if even conscious of this fact, and persuaded to swallow drugs, or undergo any particular treat-

as *feticidium*, and *infanticidium*, which already belong to the subject; not to strengthen its claims by multiplying examples of similar compounds, *homicidium*, *parricidium*, &c.

ment, through a false pretence of aiding or regulating the course of nature, she must be acquitted of criminal participation. He gives an enumeration of spontaneous or involuntary causes of abortion, in which we find nothing singular. The observation also is just, that, in cases of disease, where the proper treatment resorted to by professional men induces abortion, the event should be laid to the account of the malady, and not to the remedies employed for its cure. All this is sensible and consonant with our own ideas — not so what follows.

M. Capuron considers (along with other French authorities), that the practice of inducing premature delivery in cases of deformed pelvis is criminal! The arguments by which this opinion is supported are the following.—Errors in calculation as to the period of pregnancy; the impossibility of ascertaining, by actual examination, the relative proportions between the head of the child and the capacity of the pelvis; and, admitting the accomplishment of all this, the questionable authority there is for inducing abortion (as *he* is pleased to term it), even in order to save the life of the mother. To all this it is easy to answer, in the first place, that the practice is almost always resorted to for the preservation of both mother and child; and that, where the life of the mother only might be saved by it, it is quite unnecessary to show how certainly one or other, but most probably both, would perish, were labour to be postponed till the full period: secondly, the greatest danger (if there be really enough in the matter to be called great), as to erroneous calculation, must arise from the delay of the operation—the event of which would, of itself, show the urgency for having had recourse to it—and still, in all probability, the mother would be saved, though at the expense of the child. In the third place, as to the argument about ascertaining the relative proportions, we take it for granted that the qualified Practitioner can always judge of those of the pelvis accurately enough; and, having done so, he must of course apply the known average of measurements of the head. But we are somewhat surprised at M. Capuron's scruples on the score of the *morality* of the thing. He admits the propriety of the measure where the life of both parties is at stake, from convulsions or uterine hæmorrhage. Is there one sort of morality for this case, and another for distorted pelvis? He says, certainly, that in the former the parts are prepared for the expulsion of the foetus, by the separation of the placenta from its attachments, by the hæmorrhage, &c.; but where the other cause exists, the preparation, if not greater, must be more *natural*, for the usual uterine action goes on, as it does at the

ninth month, when (in a natural labour) the parts are not prepared by separation of the placenta, or the discharge of blood. The intention is to bring on a labour, premature in date, but natural in progress, at a period when the child has attained a rearable state, but before the head has reached a size which must prevent it from passing through the pelvis. M. Capuron contests the *possibility* of inducing "abortion" at the seventh or eighth month, without compromising the life both of mother and child! Can he be so unacquainted with the results of the practice, in this country at least, as seriously to say, that "perhaps it is not possible to quote a single authentic fact, to attest the harmlessness of such an operation, in a case of deformed pelvis?"* Or are we indemnified for the misfortunes of our Cæsarian practice, by a peculiar and inimitable success in that under consideration?

"We cannot dissemble," says he, immediately afterwards, "that the Cæsarian operation, and *symphysiotomy*, would appear to us preferable to premature delivery" (here the thing is called by its right name)—that is, in a case of very deformed pelvis. "In the first place, the former has had incontestable success; it is a fact that, up to this date, it has saved about one woman in three; and some of those who have sunk under it, would certainly have escaped, had the operation been resorted to before the expenditure of their strength. Symphysiotomy has also had advantages, which cannot be called in question." We should like to have had M. Capuron's account of some of these; but this is the sum and substance of what he says on the matter. But why protract this discussion? What Practitioner in Great Britain can be made a convert to cutting through the abdomen, or splitting up the pelvis, in preference to a practice which closely imitates, if it does not even identify itself with the natural exercise of Nature's powers?—a practice established by a solemn and deliberative act of the most eminent members of the Profession, and for ever sanctioned by its happy results. What the case may be in France is another matter; and we are far from condemning M. Capuron for maintaining opinions which may be, and doubtless are founded on experience—though we wish he had made it clearer that they are so.

Our author divides "abortives," or the causes of miscarriage, into general and local. Among the former, he notices the tricks resorted to in the way of venesection, and cautions Practitioners employed to inspect cases of this nature respecting them. He recommends to examine for cicatrices in the

course of the veins, and for the triangular marks of leeches about the vagina, abdomen, &c. He admits the inefficacy of the practice in many instances, and even its power of preventing abortion in certain cases. He applies similar remarks to the administration of drastic purgatives, emetics, &c. during pregnancy; but we find no allusion to the ergot of rye, which, there is reason to believe, does possess the power of exciting uterine action.

We shall not enumerate the local means of exciting abortion. He confines the question to the fact of means, whether general or local, having actually produced the effect. It is quite unnecessary for us to go into the merits of this point; for it has been ruled in our courts, that whether articles administered for the purpose of procuring abortion possess such power or not, if it be proved that the person employing them believes that they do, and gives them *tali animo*, the criminality is established.

The signs by which the occurrence of abortion is to be ascertained, are here divided into anterior or precursory, concomitant, and consecutive. As those constituting the first, we have sudden collapse of the abdomen after gradual enlargement, cessation of the menstrual flux, inordinate appetite for strange articles of food, and frequent vomiting in a healthy woman. This account does not strike us as being very much to the purpose. As far as it goes it relates correctly enough to pregnancy, but we do not see the peculiarity of its application to abortion.

As concomitant signs, we have the ordinary indications of the separation of the ovum — in other words, those of parturition, modified in a manner too familiar to Practitioners to require detail. M. Capuron very properly advises us not to rest satisfied with the detection of any single sign, and even where a plurality is ascertained, to satisfy ourselves that they are not induced by some other cause. Alluding to the consecutive signs, he considers it almost impossible, in general, to come to any certain conclusion after ten days have elapsed; and there is no mark either of impregnation or delivery which, taken singly, might not arise from some other cause. Thus milk may exist in the mammaræ without pregnancy. Not only has this been found to be the case in women both before and after the child-bearing period of life, but even men have given suck plentifully; nor do we consider this as any thing very strange, not doubting, for our own part, that the phenomenon might be produced in any individual. Laxity of the abdominal parietes is produced by the evacuation of water in dropsy, by rapid diminution of obesity, &c. The vagina, and even the os uteri, may be relaxed in various ways even in

the virgin state; nor are discharges, whether of blood or other fluids, from the uterus, of themselves sufficient to prove the prior existence of impregnation. Substances may even be expelled from the uterine cavity, accompanied by the ordinary symptoms of early abortion, which, if carelessly examined, might be set down as ova, without the slightest foundation. It becomes therefore imperative to acquire a knowledge of the characteristics of the foetus in the course of its development in embryo.

In examining the substance expelled from the uterus, and suspected to be an ovum, it must not be fingered or pushed about with a stick. Our author recommends that it should be placed in a large vessel filled with water. If the mass be merely a clot of blood, it will dissolve; if it be partly so, what remains will be so friable that the least pressure of the fingers will be satisfactory. If it be a mole, or false conception, it will be more solid, and, after being washed in water, will exhibit the appearance of an unorganized mass, more or less homogeneous, surrounded with a very hard membrane; and even should there be a small quantity of liquid in the cavity, nothing will be found resembling a germ or foetus.

During the first month of pregnancy, we can hardly suppose that means to excite the expulsion of the ovum will be resorted to. In fact, the passing of a single period of menstruation without the usual appearances, generally does no more than alarm; while the same thing happening again commonly satisfies the wary as to the probable state of affairs. It is also to be recollected, that conception must, in many instances, take place at some date between the two periods; but where it either immediately precedes what might have been the first, or follows immediately after, the sixth week will probably arrive before the suspicions of the parties will be so effectually roused as to urge them to adopt the measures in question. This is also about the general time of morbid abortion in the early period of pregnancy. At this time, our author says that the embryo is contained in a sort of capsule, composed of two membranes; one exterior, covered with down, thick, reddish-coloured, and rather opaque, forming the chorion; the other, the interior, thin and transparent, which is the amnios. This capsule is about the size of a hen's egg; and, at the commencement of pregnancy, there being less adhesion between the membranes than between the external one and the uterus, it happens, in miscarriages occurring at this period, that the chorion and amnios separate and are expelled at different times. The first is torn, and allows the second to escape, under the appearance of a membranous egg. It afterwards comes away itself,

imbedded in blood, adhering to its downy covering; on which account it may be confounded with a clot, if not attended to carefully. He also remarks, that, in the early months, the placenta is proportionally larger than the fœtus.

Infanticide is "the voluntary murder of a new-born infant, as soon as it leaves the womb of the mother, to continue life as a member of society: which, of course, implies, that it is born viable, and at the full term." Such is the definition of M. Capuron; and, leaving out the last clause, we have no hesitation in adopting it. For, if we allow the child to be viable, we must admit the possibility of its being born before the ninth month. We might, therefore, confine the crime to the murder of a new-born infant from the seventh to the ninth month of gestation; referring all cases in which it is possible to show that the subject had not reached the first of these periods, to the question just considered. At the same time, it may be proper to observe, that infanticide must necessarily refer also to cases in which the child is destroyed in the birth.

In this country the crime is punishable with death; and, from the time of king James I. till towards the close of his late Majesty's reign, the capital offence was implied where a woman had concealed the birth of a child, which, if born alive, would have been a bastard. As the law on this subject now stands, however, concealment is a misdemeanour, of which juries may find a prisoner guilty where the capital charge of murder is not made out — provided there be evidence to establish the minor offence. We observe that of late this has been repeatedly done. An idea has been gaining ground in this country, and has even been adopted on the Bench, that there is no means of proving, by the examination of the body of the child, or, in other words, by pure medical testimony, whether the infant was born alive or not. We know very well what has given rise to this persuasion, the consequence of which may be easily anticipated; but we shall be content, in this stage of the inquiry, to enter our own dissent from any such doctrine. To investigate a case as it should be done, before drawing a conclusion, we allow to be very troublesome; and to pronounce an unfavourable opinion must, in very many cases, be painful; but when medical men are employed to investigate and declare the truth, their duty is not to save themselves trouble, repugnance, or even odium, but to perform their task without being influenced by regard to consequences.

M. Capuron prepares us to meet with repetitions. Few authors have written on the subject without these; but although they may in some degree be unavoidable, they

should not be mixed up with that obscurity which has made the discussion of this important subject almost proverbially superfluous. Too many writers have left it as they found it; and we fear that our author is not quite free from this imputation.

"The Practitioner," says M. C., "should be perfectly acquainted with whatever may cause the death of the infant without design or criminal intent, so as not to confound, the schemes which have been devised by wickedness and deceit for the purpose of destroying life, under these circumstances. Let us exhibit, therefore, the picture of both, with all possible order and clearness."

We have the following *innocent* causes of death in a newborn infant:— 1. *A long and dangerous labour, especially where the waters have prematurely escaped, and where the head of the fetus is long retained in the pelvis or os uteri.*

"The death of the child is here effected by long, powerful, and frequent contractions of the womb, which press the head against the pelvis, compress the placenta and umbilical cord, urge the blood towards the brain, and produce apoplexy. This event is manifested after birth by the insensibility and immobility of the child, in almost all cases by a serous or bloody tumour more or less extended, or considerable, on the vertex or occiput, where the orifice of the uterus has contracted during the labour; by deformity and lengthening of the head; by the sinking, fracture, mobility, and black colour of the bones of the cranium; by relaxation and laceration of their uniting membranes; by the separation of the pericranium; by tumefaction, ecchymosis, and even contusion of the countenance; by a red, livid, blackish, marble colour of the lips, cheeks, eye-lids, and neck; by the difficulty or impossibility of reanimating the vital powers; by the effusion of blood under the pericranium, upon the dura mater, or between it and the pia mater, in the ventricles of the brain, or at the base of the cranium."

2. *"A delivery preceded by a total or partial separation of the placenta.—*The child dies here by losing all its blood through the surface of the placenta. It comes into the world bloodless, pale, discoloured, or of the hue of wax." On dissection, the vascular system will be found void.

3. *A delivery complicated with premature expulsion of the umbilical cord.* Apoplexy, says our author, is here inevitable.

4. *Where the child approaches by the feet, &c., and the trunk of the body being expelled as far as the neck, the head is long retained.* He ascribes the death here to pressure on the cord, though he adds that upon this point authors are not agreed, some considering death to be caused by the weight of the body pulling the neck—in other words, by strangulation.

We are disposed to allow that either or both may be the case.

5. *Where the shoulders are retained after the extrusion of the head; from their presenting their long diameter to the short one of the pelvis.* In addition to the *ratio moriendi* allotted to the preceding case, he includes the difficulty of respiration, from the thorax of the infant being pressed upon by the maternal parts. This is a supposition of some consequence, as will appear when the economy of first respiration comes to be considered. It has also been supposed, in such cases, that the contraction of the os uteri on the neck of the infant may cause strangulation. This, however, is hardly reconcilable with the assumed position of the child.

6. *A labour complicated with uterine hæmorrhage, convulsions or other accidents rendering speedy delivery necessary.* In such a case, however, a charge of infanticide can never be brought. A Practitioner must necessarily be the means of destroying the fœtus here, for a lawful and necessary purpose, viz. saving the life of the mother.

7. *Where the head of the child has been extracted by the forceps, &c.* The same remark is applicable here. The case is not one of infanticide in the medico-legal sense.

8. *Weakness of the infant, through prematurity, or disease either of the mother or itself.* This must be established by the appearance of the child or the history of the mother during her pregnancy.

9. *Twisting of the umbilical cord round the child's neck.* On the one hand, the circulation in the cord may be impeded by the action of the uterus, and, on the other, that in the foetal jugulars by the stricture of the cord. Such a case is marked by ecchymosis round the neck, unaccompanied by abrasion or alteration of the epidermis.

10. *Rupture of the cord during labour; by which the child is destroyed, if not born in time to respire.* The general marks will be the same as those mentioned under number 2; and the cord will exhibit a solution of continuity, with unequal edges.

In all these cases, if the facts are established, no criminal imputation will be admissible; and there are other ways in which a new-born infant may perish, without blame on the part of the mother — but as proof will be necessary for her exculpation, we cannot rank them with the foregoing.

We now are informed respecting the criminal methods of destroying the infant in the birth. Here we have an allusion to a case where a woman, sitting on a small bucket by the fire-side, in company with eight of her neighbours, who had come to spend the evening, was delivered, without their knowledge,

of a child, whose head she crushed by strongly compressing it between her thighs during its transit! This is said to have been established as a fact before a tribunal. Our wonder is not the less on that account. A more likely method of making away with infants at this juncture, is by thrusting a sharp and small wire, or needle, through the membranes of the cranium. But this almost necessarily involves evidence of an accomplice. Proper cautions are given as to the real import of marks of violence on the body of the infant. The Practitioner should carefully examine them, and consider whether they are consistent with the application of instruments to promote delivery, however unfortunately, or even unskillfully applied. Thus the traces of the forceps, or lever, or crotchet, may be recognized and distinguished from the marks left by the hand, the umbilical cord, any other ligature, pressure of the parts of the mother upon the head, &c. &c. The whole history of the mother, as to health, formation, course of pregnancy, &c. must likewise be taken into account; and if the course of the phenomena during the labour can be ascertained, much assistance may thence be derived, in making up one's mind as to the real state of the case. Our author concludes the topic of destroying the child *in partu*, by quoting an affair of this nature from Fodéré. A woman was accused of destroying her offspring, upon evidence founded on a vague examination of marks of violence, all of which Fodéré and several other members of the Profession reconciled with the attempts of the mother to deliver herself in solitude. Certainly the report upon which the condemnatory process was established, is such as no one who performs his duty properly ought to have drawn up. Such evidence would not condemn a woman under similar circumstances in an English court; but in similar cases, although every mark of violence might consist with mere efforts to extract the child, there is criminality in wilfully running the risk of a solitary labour, though there may be no purpose of murder. The child perishes for want of assistance; and unless the presumption of good intentions on the part of the parent is corroborated by circumstances, a presumption the other way is equally admissible.

Here we would stop to observe, once for all, that it weighs greatly in a woman's favour, when implicated in a charge of child-murder, under circumstances of this kind, that she has made known the fact of her pregnancy, or has prepared the necessary means of treatment for herself and expected offspring. Labour may certainly overtake a female unexpectedly, when no help can be obtained, or may proceed so rapidly as to be over before any can be sought. In these cir-

circumstances the child may perish, without any criminality on the part of the mother; or it may be still-born. In a case of illegitimate birth, it is too much, perhaps, to expect that an unfortunate girl shall now publish the event, if she can possibly conceal it — at least as long as the penalty she must pay for her imprudence even by that measure is, in many minds, equally severe with the other, viz, the loss of every thing that gives value to female existence.

(To be continued.)

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

I. *Farther Observations on the Functions of the Roots of the Spinal Nerves.* By F. MAGENDIE.

In our Number for October last, we gave an account of a series of experiments which M. Magendie had instituted for the purpose of determining the functions of the anterior and posterior roots of the spinal nerves. By these experiments he was enabled "to assert positively, that they are possessed of different functions; that the posterior appear more particularly destined for sensibility, whilst the anterior seem more especially connected with motion." Since the appearance of M. Magendie's essay on this subject in the *Journal de Physiologie* for August last, Mr. Shaw, of Windmill Street, has endeavoured to prove that Mr. Charles Bell is entitled to the merit of the discovery. In answer to Mr. Shaw's observations, M. Magendie has inserted an article in his *Journal* for October, in which, with a degree of liberality that might act as an example to some physiologists on this side the water, he waives his claim to originality of idea, and modestly limits his pretensions to having positively established the fact, that the anterior roots are subservient to movement, whilst the posterior more particularly appertain to sensation. The following is an account of the farther experiments detailed by M. Magendie in the October Number of the *Journal de Physiologie*:—

"It is well known that the nux vomica occasions very violent convulsions both in man and animals. I was anxious to know if these convulsions would take place in a limb when its nerves of motion were divided, and if they would declare themselves as strongly as usual when its nerves of sensation were divided. The result was quite in accordance with the former; that is to say, the animal, when the posterior roots were cut, was affected with perfect tetanus, as intense as if the spinal roots had been all uninjured. On the contrary, in an animal, where I had divided the nerves of motion, the limb remained supple and motionless; at the same time that every other muscle of the body experienced the most marked tetanic contractions. I felt anxious to resolve, by experiment, whether contractions would be produced, on irritating directly the posterior spinal roots or nerves of sensa-

tion, and whether direct irritation of the nerves of motion would produce pain. With this view I commenced examining the posterior roots or nerves of sensation. The following were the results:—When these nerves were pinched, pulled, or pricked, the animal experienced pain, but its intensity was not to be compared with that which exhibits itself on touching, even lightly, the spinal marrow at the place where these roots originate. Almost every time, also, that we excite the posterior roots, contractions are produced in the muscles to which the nerves are distributed: these contractions are, however, but little marked, and infinitely less weak than when we touch the marrow itself. When a fasciculus of the posterior root was divided at once, a movement was produced in the whole of the limb upon which it was distributed. I have repeated the same experiments upon the anterior fasciculi, and obtained similar results, but inversely; the contractions excited by the pinching, pricking, &c. being very strong, and even convulsive, whilst the signs of sensibility were scarcely visible. These facts, therefore, confirm those which I announced before, except that they seem to establish that sensation is not exclusively in the posterior roots, nor motion in the anterior. A difficulty, however, might still suggest itself. When, in the experiments above mentioned, the roots were divided, they were continuous with the spinal marrow; and might not the shock communicated to the latter be the true origin of the contractions, as well as of the pain which the animals experienced? In order to remove this doubt, I repeated the experiments after having separated the roots from the spinal marrow; and I must confess, that, except in two animals, which were affected with contractions when I pinched or pulled the anterior and posterior fasciculi, I observed in no case any sensible effect on irritating the anterior or posterior roots, so separated from the spinal marrow. Another species of proof still remained to be tried, viz. galvanism: the spinal nerves were excited by this agent, first in their ordinary state, and afterwards when divided at their spinal extremity in order to place them upon an insulated body. In these different cases I obtained contractions with both sorts of roots; but the contractions which followed the excitation of the anterior roots were generally much more strong and complete than those which arose when the electric current was established by the posterior. Similar phenomena took place whether the zinc or copper pole was applied to the nerve.

“I have still to give an account of the researches which I have made in endeavouring to trace sensation and motion on the other side of the roots of the nerves, viz. in the spinal marrow. I am incessantly occupied with this subject.

“Before terminating this article, it is necessary that I should make some observations respecting the novelty of the results which I have announced.

“When I wrote the paper contained in the preceding Number, I believed that I was the first who had thought of dividing the roots of the spinal nerves: but I was soon undeceived by a short note from M. Schauz (Shaw), which that young and attentive Surgeon had the complaisance to send me after he received the Number of my Journal. It is said in this note that Mr. Charles Bell had performed this section thirteen years before, and that he had not observed any impediment to motion when the posterior roots were divided. Mr. Shaw adds, that Mr. Charles Bell had mentioned this result in a small pamphlet printed for his friends alone, but not for publication. I immediately requested Mr. Shaw to send me the work of Mr. Bell, if possible, in order that I might render him every justice which was due to him. A few days afterwards I received it from Mr. Shaw. This pamphlet is entitled, ‘*Idea of a new Anatomy of the Brain, submitted for the observations of his friends: by Ch. Bell, F.A.S.E. (F.R.S.E.)*’ It is very curious, from its containing the germ of the author’s recent discoveries

on the nervous system. At page 22 is the passage pointed out by Mr. Shaw, which I shall transcribe:—

“Next, considering that the spinal nerves have a double root, and being of opinion that the properties of the nerves are derived from their connexions with the parts of the brain, I thought that I had an opportunity of putting my opinion to the test of experiment, if different endowments were in the same cord, and held by the same sheath. On laying bare the roots of the spinal nerves, I found that I could cut across the fasciculus of nerves, which took its origin from the posterior portion of the spinal marrow, without convulsing the muscles of the back; but on touching the anterior fasciculus with the point of the knife, the muscles of the back were immediately convulsed.”

“It will be seen by this quotation from a work with which I could not be acquainted, seeing it has never been published, that Mr. Bell, conducted by his ingenious ideas on the nervous system, had well nigh discovered the functions of the spinal roots: the fact, however, that the anterior are destined for motion, whilst the posterior appertain more particularly to sensation, appears to have escaped him: I must therefore confine my pretensions to having established this fact in a positive manner.”—*Journal de Physiologie, Octobre, 1822.*

II. Case of Neuralgia of the external Popliteal Nerve. By M. F. RIZES.

“Nicolas Victor Lesueur, an invalid soldier, aged forty-five years, was wounded, by a musket ball, on the 6th of July, 1809, at the battle of Wagram, in the external part of the left leg, about a third from the top: he remained upon the field of battle until the next day. The consequent swelling which took place during this interval prevented the Surgeons from endeavouring to extract the ball, which was not discharged until the end of three months. The wound then healed immediately.

“From the eighteenth day of the accident, until the month of October, 1817, the time at which the section of the external popliteal nerve was performed, the wound was accompanied with very extraordinary nervous paroxysms. I observed, that some days before each paroxysm, a swelling, about the size of a small pullet's egg, supervened on the wounded part, or rather upon the cicatrix. This tumour was painful upon pressure. The leg became livid; the walk unsteady; and, soon afterwards, he was unable to sustain himself upon the wounded limb. Convulsions declared themselves, commencing at the cicatrix, thence extending over the left side of the body, and afterwards over the right. The legs were alternately bent and extended upon the thighs. These motions were replaced by a tonic contraction of short duration. The upper extremities soon underwent similar contractions, when he was a prey to the most excruciating pain, fancying that he felt the bones breaking, *the nervous cords experiencing laceration*, and his limbs burning. This pain was expressed by frightful cries, which were audible at a great distance, and disturbed the patients in the whole infirmary. A copious perspiration then broke out over the whole body, so as to drench the mattress. The lower jaws experienced a trembling similar to what we observe in the cold fit of intermittent fevers. The abdominal muscles did not present any remarkable contraction: those of the posterior part of the neck sometimes underwent a certain degree of rigidity. The pulse was frequent and contracted; the respiration more hurried than ordinarily; and *the intellectual faculties in no ways altered*: his thirst was unquenchable.

“The cessation of the paroxysms was announced by a sudden movement of extension and flexion of the limbs, which then remained quiet for some moments: the same contractions afterwards recommenced, leaving greater intervals. At last he became composed, but was obliged to keep his bed

for four or five days, until his strength, which had been exhausted from the intensity of his suffering, was repaired.

"The nervous symptoms, which have been just described, appeared on the eighteenth day after the wound, and recurred every day at uncertain periods, until the month of July, 1810, at which time he went to the waters of Bourbonne, but only experienced slight benefit from their use. Being reported unfit for service, he was admitted into the *Invalides*, on the 4th of November of the same year. During the first sixteen months after his admission into the *Hôtel*, the paroxysms returned every day. Their appearance, intensity, and duration, however, were by no means fixed: the longest did not continue above three hours. After this lapse of time, a calm of forty days succeeded; and he was considered to have got rid of his complaints, when a new attack came on, which confined him to his bed for four months. This space of time was marked by paroxysms which returned every day: in short, from the month of August, 1812, to the month of October, 1817, the intermissions were longer, their duration being from two months and a half to three months; but to this calm there succeeded a distress of forty days, accompanied by almost incessant paroxysms, which were increased both in frequency and intensity by the least variations in either the moral or physical regimen.

"Lesueur did not enjoy a perfect calm in the interval of the paroxysms: he was in a condition which cannot be defined, and which was not natural to him; his sleep was interrupted by startings, and he was troubled with violent palpitations, and perspirations less considerable than during the paroxysm, but sufficiently copious to incommode him. He was restless, irascible, difficult to please, exacting, and never content.

"Among the very great number of means employed by the late M. Coste, Physician-in-Chief to the *Invalides*, who attended this patient, moxa and opium were almost the only remedies from which he derived any advantage: the baths scarcely ever did him any good.

"All the means employed having been found ineffectual, and the patient still continuing to express his pain by the most distressing cries, M. Coste determined to have a consultation respecting his case, in order to obtain, if possible, from the united talents and experience of his colleagues, some relief for his unfortunate patient.

"M. Yvan, Surgeon-in-Chief to the *Invalides*, proposed the section of the external popliteal nerve, as the only effectual means; but fearing that the divided nerve might reunite, or that the two ends might approximate and be joined by some intermediate substance, he proposed that a tolerably large portion of this nerve should be cut out, in order that there might be neither union nor approximation between the divided portions. This opinion was unanimously accorded with, and the operation was performed towards the middle of October, 1817.

"M. Yvan, who was the operator, directed the patient to be laid upon his right side: he then made a transversal fold in the skin, some lines above the head of the fibula, one end of which he retained with the thumb and index finger of the left hand, and the other he gave to an assistant to hold: with a common scalpel he cut out this fold in its whole extent; and afterwards enlarged the incision towards the two angles, so that the wound was about three inches long. The nerve was soon laid bare and divided high up: this being done, he turned it out and cut it low down towards the inferior angle of the wound, so that about eighteen lines of the nerve were removed. The edges of the wound were brought together, and on the eighth day it was cicatrized. The operation was performed with the greatest promptitude, being finished in a few seconds.

"I saw the patient some hours after the operation: he had slept a jittle; he told me that his condition was totally changed for the better—

that a thorough revolution had taken place, and that he was no longer the same. He was calm and tranquil, except that he felt a pain in the foot, which he had never before experienced; but some time afterwards it disappeared. The sweating, palpitations, and startings, &c. which disturbed his rest, likewise disappeared.

"In the six years which have elapsed since this operation, he has had six or seven paroxysms; but the point at which they arise is no longer the same.

"The muscular contractions and the pain have been observed to be very weak, and the derangement infinitely less; so that, in general, the paroxysms were of very little duration, and resembled scarcely in any particular those which showed themselves prior to the operation. Lesueur now enjoys very good health, and for the last fifteen months has experienced no nervous disorder."—*Journal de Physiologie, par F. MAGENDIE, Octobre, 1822.*

III. Observations on the Kind of Death produced by the Nux Vomica. By M. SÉGALAS, d'Etchepare, Private Professor of Physiology and Pathology.

The following are M. Ségalas's remarks upon this subject:—

"1st. If we take two Guinea pigs, and produce asphyxia in one, by strangulation, whilst, at the same time, we inject into the bronchiæ of the other two or three grains of the alcoholic extract of nux vomica suspended in a spoonful of water, the poisoned animal is immediately seized with a tetanic rigidity, and seems almost deprived of sensibility and motion, whilst the animal in a state of asphyxia preserves the power of motion and sensibility for several minutes.

"2dly. If, in order to place both animals under similar circumstances, with regard to the fluid introduced into the air passages, we inject into the bronchiæ of that which is affected with asphyxia a quantity of water equal to that which serves as a vehicle for the poison, the difference in the death is little less striking.

"3dly. If, in order to be still more satisfied that the respiration of both animals is placed under perfectly similar circumstances, we begin by decapitating them, and inject into the two tracheæ an equal quantity of poisonous and of pure water, death by poisoning occurs still more speedily than that by asphyxia, and the distance between them is greater or less, according to the precautions which we may have taken in order to prevent or diminish the hemorrhage produced by the operation.

"4thly. We may, to a certain point, extend, at will, the interval between the two deaths, by establishing artificial respiration in both animals, immediately after having decapitated them, and injecting a strong dose of the poison into the cavity of the abdomen of one of them. The latter, under such circumstances, dies almost instantly, whilst the other survives twenty, thirty, forty minutes, more or less, in proportion to the care which we take in endeavouring to prevent the effusion of blood, and to keep up the natural respiration."

From these experiments, which he repeated several times before his pupils, M. Ségalas concludes, in opposition to M. Magendie, who was of opinion that the nux vomica produced death by its secondary effects upon the respiration, that "strychnine, administered in a strong dose, produces death, not by asphyxia, but by a direct action upon the nervous system, similar to what may be produced by a strong electric shock."—*Ibid.*

IV. Singular Remedy for Hooping-Cough. By Dr. ARCHER.

Dr. Archer, an American Physician, has announced, that the hooping-cough may be certainly cured by vaccinating the patient in the second or third week after the commencement of the disease. — *Nouveau Journal de Médecine, Septembre, 1822.*

V. *Case of Disease of the Hepatic System, with Destruction of the Gall-bladder.* By M. NACQUART; read at the *Société de Médecine* of Paris.

The Marquess de T., aged about sixty-eight years, of a bilious constitution, and dry habit, was in the enjoyment of good health, when, in 1794, in consequence of excessive fatigue and privations of all kinds which he experienced in emigrating, he was seized with such a violent pain in the right hypochondrium, as totally to prevent him from holding himself straight. The most marked inflammatory symptoms continuing, a large tumour, with fluctuation, showed itself in the same region. This tumour, which was suffered to open spontaneously, gave issue to an enormous quantity of purulent and greenish fluid: a great number of biliary calculi were also discharged, several of which were very large. Cicatrization, a long time delayed, at last took place. The health was not completely re-established, and during the ten subsequent years, four other abscesses, more or less similar, were again formed, and always nearly in the same place: these abscesses also discharged great quantities of biliary calculi.

After this time the respiration was never very free: he was disposed to bend himself forwards and to the right side; but too quick or extensive movements of the trunk occasioned pain, which he referred to adhesions, which he supposed to exist around the liver. He was affected with extreme emaciation, slight cough, and great paleness, although his appetite was good, the sleep tranquil, and the general functions of the economy tolerably natural.

Several times during twelve years, I treated him, by local blood-letting, a cooling regimen, and emollient topics, for *pleurodynic* pains, which, from affecting more especially the right hypochondrium, threatened a return of abscesses.

About six months ago he was attacked with excessive difficulty in deglutition, which diminished under the action of emollient and opiate embrocations, of leeches to the neck, of a vesicatory to the part, and afterwards to the nape of the neck, and of mucilaginous drinks. It never, however, wholly yielded, but soon reappeared, accompanied by a spitting of glairy matter, which subsequently became incessant and to a great extent: there was occasionally an expectoration, without cough, of thick and puriform sputa.

The difficulty of deglutition having made fresh progress, it became almost impracticable; and alimentation, as imperfect as difficult, could only be accomplished with the most intolerable pain. The right hypochondrium, as well as the whole of the epigastrium, appeared also more sensible, which the patient attributed to a sudden turning of the trunk; the pulse became very frequent, but without any change in the heat of the skin; the puriform expectoration and glaucous spittle augmented each day, and the urine was scanty.

The emaciation was soon carried to an almost incredible extent. Diarrhœa supervened, and the patient succumbed on the 18th of June, less apparently from a well-marked morbid condition, than from a slow, gradual, and, at last, total extenuation. At the dissection, which was performed on the following day, we observed the following phenomena:—

The peritoneum did not contain a drop of fluid; it was of a natural colour in its whole extent, except towards the superior surface of the stomach, and towards the place of union of the colon with the cœcum. The mucous membrane of the stomach was livid and brown in different parts, and that of the colon and cœcum was covered with superficial ulcerations, some of which were six or eight lines in diameter.

The liver, which was scarcely half the natural size, was entirely confounded with the diaphragm, by a white, fibrous substance, approaching, in several of its parts, to the nature of cartilage.

It adhered also to the pylorus, and afterwards to the peritoneum of the whole right side of the abdomen, by a similar tissue. The gall-bladder was entirely wanting, and in its place there was a depression which was filled with this same fibrous production, from the centre of which the ductus cysticus issued, which had lost nothing in diameter towards the intestines, but terminated in the membrane substituted for the gall-bladder. Insufflation of the duodenum could not distend it. The ductus communis chole-dochus, as well as the ductus hepaticus, were in their natural state. The liver itself was healthy; and its parenchyma, which was universally supple, and of a slightly pale colour, was totally free from fibrous portions or other traces of organic derangement.

The left lung was healthy, as well as the pleura which surrounded it: the same may be said of the heart and its appendages. But the right lung, which was entirely converted into a tubercular, hard mass of a deep brown colour, in the midst of which were abscesses, and cavities, which seemed empty, adhered every where so closely to the pleura (itself disorganized), that it was impossible to separate it from the ribs and diaphragm, otherwise than by tearing it; no portion appeared to have been, for a long time, permeable to the air; its greatest part was composed of somewhat small and hard tubercles. The pharynx, as well as the fauces and œsophagus, attentively examined, were found, with the cardiac orifice, in the natural state. Neither the mucous membrane nor subjacent tissues manifested either redness or tume-faction.

The pia mater, in the portion which covers the hemispheres, was covered with a gelatinous, transparent layer. The rest of the encephalic organ was healthy.—*Journal Universel des Sciences Médicales, Août, 1822.*

VI. *On a new Mode for the Cure of Prolapsus Ani.* By M. DUPUYTREN.

M. Dupuytren having frequently had occasion to remark the inefficacy of most of the plans adopted for the cure of persons labouring under prolapsus ani, hit upon a mode of cure which he considers as one of the most important inventions in surgery of which he has been the author. This simple operation consists merely "in cutting off a greater or less number of the cutaneous and projecting folds of the verge of the anus: the operation contracts the opening, by drawing it together almost in the same manner as occurs in a purse when the strings are drawn tight." The number of folds which M. Dupuytren removes is proportioned to the size of the protruded intestine, and the dilatation of the anus. Ten or twelve patients have been treated by this method, and all have been cured without any unpleasant symptom or relapse.

Should an artery be opened during the operation, M. Dupuytren immediately cauterizes it. No dressing is required, attention to cleanliness being commonly sufficient to produce the cicatrization of the wounds, and the complete cure of the patients, in less than twelve or fifteen days.—*Journal Universel des Sciences Médicales, Octobre, 1822.*

VII. *On the Use of the Preparations of Gold.* By Professor LALLEMAND, of Montpellier.

This Physician has recently published an essay on the employment of preparations of gold in medicine. He has obtained very speedy and permanent success from the muriate of gold and soda in several individuals affected with inveterate syphilitic complaints, where mercurials had failed. M. L. prefers the salt of gold to mercury, in all those cases where a first mercurial course has been unsuccessful, and *à fortiori*, after a second and third: he has likewise employed it successfully in recent affections. M. L. recommends it to be rubbed upon the gums, tongue, or inside the cheeks. The dose is, at first, a fifteenth or sixteenth of a grain, which may be gradually increased to a fourteenth, twelfth, &c. to a sixth of a grain. Seven or eight grains are commonly sufficient. During the use of the remedy, no remarkable morbid change occurs in the state of health: the gums are no

affected by it, and the external characters of the disease quickly disappear. — *Nouveau Journal de Médecine*, Octobre, 1822; and *Journal Universel*, Août, 1822.

VIII. *Case of Cæsarian Section*. By M. BORRONE, Surgeon at Salto.

A female, aged thirty-six years, died, at the full period of gestation, of dysentery, with which she had been affected for two months. She was in a complete state of emaciation. M. Borrone having been immediately called, performed the Cæsarian section, and extracted from the body, twelve minutes after death, a small emaciated female child. It was some time before the infant uttered the least cry; but it felt warm, breathed, and the pulsations of the heart were manifest. Thirty-two minutes after extraction, it began to suck. It gradually acquired strength, and about the middle of the year 1822 was tolerably robust. — *Repertorio Medico-Chirurgico di Torino*, No. 2.

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

1. *Pharmacopœia Imperialis, sive Pharmacopœiæ Londinensis, Edinburgensis, et Dublinensis Collatæ; cum Notis Anglicis Decompositiones Chemicas exponentibus*. Pp. 255. London, 1823.

"The design of the *Pharmacopœia Imperialis* is to give a comparative view of all the formulæ in the last editions of the three Pharmacopœias, with a brief explanation of those processes in which the chemical changes produced are most worthy of remark."

The Latin text has, very properly, been followed; and the corresponding formulæ have been successively arranged, so as to afford the best means of comparing them. The editor has appended very copious indices, which will greatly facilitate that reference which practitioners and students ought to make to it. Indeed, translated pharmacopœias, English dispensatories, and English formulæ, have lately multiplied to such a degree amongst us, that we are glad to see the "weapons of our warfare" hid "from vulgar light" in a language which ought to be cultivated by all ranks of the Profession. On these grounds we cordially recommend the *Pharmacopœia Imperialis*.

Observations on the Acute and Chronic Dysentery of Ireland; containing an Historical View of the Progress of the Disease in Ireland, with an Inquiry into its Causes: and an Account of its Symptoms and Mode of Treatment, with a Report of Selected Cases. By John O'Brien, M.D., Fellow of, and Censor to, the King's and Queen's College of Physicians in Ireland; and Physician to the Fever Hospital, and House of Recovery, Cork Street, Dublin. Dublin, 1822. 8vo. Pp. 100.

Dr. O'BRIEN has entered at some length into the history of dysentery, but our limits will not permit us to dwell upon his observations; this omission will, however, be considered of but trifling importance, when our readers are informed that there is but little novelty in Dr. O'Brien's remarks. The following history will instruct them respecting his mode of treating the disease: "Michael Kelly, admitted 9th May, 1817, æt. 25, tenth day of illness; complains of severe gripes, *neëding* (tenesmus) and bloody stools; the number of his stools, to use his own words, 'past counting.' He describes his belly as 'tearing to pieces inwardly;' attributes his disorder to cold and wet feet; took no medicine but a dose of salts. 10th. *Fiat venæsectio statim ad uncias duodecim; — calomel gr. sex; opii gr. i.; hor. som. balneum tepidum vesperi.* 11th. Stools less frequent; gripes easier; pulse 98; tongue white. *Ol. Ricini cam. tinct. Rhei, calomel et opium, et balneum tepidum ut heri.* This plan was con-

tinued regularly on each day; on the sixth day after his admission, his mouth became sore, his pain and purging ceased, and he became convalescent."—P. 78.

With respect to the execution of the work, we are sorry to be compelled to say that it is any thing but what it ought to be; the language is frequently careless, and sometimes almost wholly unintelligible: added to which, the work abounds with typographical errors; for we cannot suppose Dr. O'Brien to commit such orthographical inaccuracies as to write hæmorrhoidal for hemorrhoidal, voluminous for voluminous, assimilating for assimilating, enteritis for enteritis, terrina for terrina, &c. &c. Yet similar inaccuracies are discoverable in almost every page of the work.

FOREIGN.

1. *Inductions Physiologiques, Pathologiques, et Thérapeutiques, ou Elémens Généraux d'Anthropologie et de Médecine déduits de Faits; précédés d'un Précis Historique des Doctrines Anthropologiques et Médicales.* Par J. F. Caffin. 8vo. Pp. lxxx.—175. Paris, 1822.

M. Caffin divides his treatise into three parts, as distinguished in his title-page. He arranges the functions into four orders, namely, those which belong to nutrition and generation—to the internal relations—to external relations—and to the intellectual faculties. This classification is neither correct nor original. How far, however, it is deficient in both these qualities, we cannot at present stop to show. M. Caffin considers that the animal economy possesses no general centre of the vital movements, but that every organic apparatus holds within itself a special condition or "principle of action," without which it cannot perform its functions. He divides the symptoms of diseases into immediate or local, mediate, and sympathetic. With respect to fever, he compounds an hypothesis out of the well known cerebral and gastric theories of this disease. His first principle connected with therapeutics is that all the bodies which surround the animal economy, and act upon it, are stimulants, but that some act in a less degree than that medium which is requisite to the continuation of health. Here we have Brownism renewed. Indeed, the author has given us a good deal from every body of note who has written lately on the subjects which his work embraces, and a little of his own. Still his work is by no means a bad one. Had he always adopted the more judicious opinions of his predecessors, instead of some of their more fanciful speculations, it would have been still better.

Recherches Physiologiques sur la Vie et la Mort, par Xav. Bichat. Quatrième édition, augmentée de Notes, par F. Magendie, Membre de l'Institut, &c. Paris, 1822. In 8vo. de xxvi. et 538 pp.

This production of the celebrated BICHAT is so well known, that it would be a work of supererogation for us to give any description of its contents; the notes of MAGENDIE are, however, so valuable, and act so beneficially as an antidote to some of the baneful opinions entertained by BICHAT, that we strongly recommend this edition of the work to the notice of our readers.

WORKS RECEIVED FOR REVIEW.

1. *A Treatise on the Disease termed Puerperal Fever; illustrated by numerous Cases and Dissections.* By John Mackintosh, M.D., Edinburgh. Blackwood. Pp. 328. 8vo. 1822.

2. *An Essay on the Absorbent Vessels.* By Henry Searle, Surgeon. London, 1823.

LITERARY NOTICE.

M. RASORI is about to publish a complete account of the *Nuova Dottrina Medica Italiana*, of which he is the author, and to which we had occasion to allude in the last Number of the REPOSITORY. The French and English translations will be published at the same time, at Paris and in London.

THE METEOROLOGICAL JOURNAL,
From the 20th of NOVEMBER to the 19th DECEMBER, 1822,
 By Messrs. HARRIS and Co.
Mathematical Instrument Makers, 50, High Holborn.

November.	Moon.	Therm.						Barom.		De Luc's Hygrom.		Winds.		Atmo. Variation		
		Rain Gauge.														
		9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	2 P. M.	10 P. M.			
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23			50	55	44	29 42	29 48	80 71	WSW	W	Fine	Clo.	Fine			
24		05	52	52	48	29 71	29 50	66 81	SW	SSW	Fine	Rain	Clo.			
25		11	51	53	45	29 42	29 40	78 80	WSW	SW	Rain	Sho.	Fine			
26		13	49	51	43	29 49	29 32	76 79	WSW	WSW	Rain	Clo.	Sho.			
27		03	46	52	46	29 45	29 53	78 84	W	W	Sho.	Fine				
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6			41	44	39	29 60	29 56	63 75	NW	NW	Fine					
7			36	40	32	29 78	29 92	79 80	WNW	WNW	Fog	Fair	Fog			
8			36	40	43	30 06	30 00	77 80	WSW	WSW	Fine		Fog			
9			49	49	39	29 97	29 98	78 87	WSW	WSW	Fine	Rain	Fog			
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The quantity of rain that fell in November was 3 in. and 15-100ths.

NOTICE TO CORRESPONDENTS.

Communications have been received from Dr. Kennedy, Dr. Collingwood, Dr. Wigton (through Dr. Johnson), Mr. Nesse Hill, Mr. Joyce, and Mr. Battley.

Our limits as well as our engagements have again obliged us to neglect Dr. Lucas.

* * * Communications are requested to be addressed (post paid) to
 Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 110. FEBRUARY 1, 1823. VOL. XIX.

PART I.
ORIGINAL COMMUNICATIONS.

I.
HISTORICAL SKETCH OF THE PROGRESS OF
MEDICINE,
AND OF THE SCIENCES CONNECTED WITH IT,
During the Year 1822.
BY THE EDITOR.

(Concluded from page 52.)

Therapeutics.—In sketching the progress that has been made in the treatment of diseases, during the preceding year, we shall commence with *nervous derangements*, and proceed in nearly the same order as was observed when recording the additions that have been made to our knowledge of pathology.

The treatment of *neuralgic diseases* has lately received very considerable elucidation, especially by the practical observations of Dr. YEATS, Mr. HUTCHINSON, Mr. NESSE HILL, Mr. THOMPSON, Dr. WILSON, Mr. HOLBROOK, M. DOUBLE, M. PIEDAGNEL, M. RIBES, and M. DUPRÉS. The preceding volume of the REPOSITORY will furnish our readers with ample details on this interesting subject, derived from the above-named sources. From a careful survey of the

whole of these, we think, it will appear that the treatment which shall remove, in the most complete manner, the deranged secretions from the intestinal surface of the stomach, and intestines, and from the biliary organs; and which shall most effectually afford energy to the functions of these viscera, and tone to the nervous system generally, will be the most successful in curing the disease, and in preventing its recurrence.

The papers of Dr. EBERLE, Dr. NANCREDE, and Dr. BROWN, in the late Numbers of the American Medical Recorder, illustrate, in a satisfactory manner, the superiority of large doses of opium, or of opium with camphor, and the tepid affusion, over other modes of practice, in the cure of *delirium tremens*. Dr. STAUGHTON, and, indeed, the majority of the American Physicians who have written on this disease, strongly recommend the treatment to be commenced with a brisk emetic. Dr. S., however, chiefly relies on the operation of emetics, which generally bring away from the stomach a thick, ropy, and viscid fluid: they frequently require to be repeated. After their exhibition, he prescribes some aromatic bitter and an opiate; or the tincture of hops, which he frequently prefers to other anodynes for the removal of the obstinate watchfulness which usually harasses the patient. When typhoid symptoms appear, the emetic plan is very properly laid aside, and he then recommends rubefacients, epispastics, camphor, opium, brandy, and musk.

The treatment of *acute cephalitis*, and of *acute dropsy* of the brain, seems to us to have acquired important additions from the use of frequent doses of tartarized antimony, especially as it is employed by LAENNEC.* This Physician very justly considers that not only is vascular action lowered, but that absorption is at the same time promoted by the proper exhibition of this remedy. It ought, however, to be recollected, that few medicines require greater circumspection, or a more judicious and discriminating use, than this. A remedy like the present, which, in the hands of Laennec or of any other good pathologist, would prove most beneficial, cannot be committed to those of the empirical Practitioner without very considerable risk. The one sees the circumstances which forbid its exhibition, or which modify its dose, and he anticipates even its contingent consequences; the other is guided only by distant analogies, and is incapable of seizing on the various changes, or of embracing the circle of deranged actions which take place in the system and characterize every individual malady, and which, with their remote relations and

* REPOSITORY for December, p. 536.

intimate connexions, render no one case of disease an exact counterpart of another.

Turning our attention to the removal of derangements of the *vascular system*, the treatment recommended by Dr. NICHOLL* in *purpura hæmorrhagica* is particularly deserving of notice. This Physician trusts chiefly to the oleum terebinthinæ for its cure; and no one who will subscribe to the pathology of the disorder, as it was pointed out in the early part of this sketch, and who has made the requisite observations respecting the effects of the remedy in question upon the animal economy, can despair of its efficacy in this disease.

Nothing of importance has been lately added to the means usually employed in the cure of *inflammations*, considered generally, beyond the recommendation of the use of camphor by Dr. BÖDTCHER, † of Copenhagen. He considers it to be of service in those forms of metastatic inflammation which, in gouty and rheumatic subjects, attack the internal viscera: "In such cases, keeping a piece of camphor in the mouth is regarded as the most efficacious manner of using it." In coughs, cynanche, croup, and pneumonia, and in inflammatory affections of the eyes, he recommends its immediate application to the seat of the disease in the form of vapour.

The employment of pressure in cases of *chronic hydrocephalus*, which was suggested by Sir GILBERT BLANE, has been successfully adopted by Dr. GIRDLESTONE. ‡ Dr. HUSSON, § of the Hôtel Dieu, has also used compression, in a case of *ascites*, with permanent advantage, after other means had failed. A tight bandage was applied round the belly for seventeen days, when the patient was dismissed cured. The urinary secretion was greatly increased during this treatment.

Amongst the derangements to which the absorbent system is liable, *scrofula* is the most frequent. It may, however, be said that this disease is no more seated in the absorbent than in any other of the common systems of the body. That it is not limited to this system, or even that it does not originate in it, we very readily admit; but that the appendages, or parts more immediately connected with the absorbents, are most frequently the seat of the disorder, cannot be denied. M. GIMELE, § and, subsequently, other Practitioners who are zealous in the advancement of medical knowledge, have

* REPOSITORY for July, 1821, and Edinburgh Medical Journal for October, 1822.

† Bibliothek for Læger.—Medical and Physical Journal.

‡ London Medical and Physical Journal for March, 1822.

§ Annuaire Medico-Chirurgical.

§ Revue Médicale, Septembre, 1821.

found the preparations of iodine of the greatest service in many of this class of disorders. The external application of the caustic vegetable alkali has also been much praised by Dr. BIRARGO,* of Milan, for its beneficial effects in these diseases.

The treatment of *tetanus* — the most important subject connected with the study of muscular lesions — has been elucidated in a very interesting manner by the memoir of Dr. KENNEDY on this malady, which appeared in the *Numbers* of the *REPOSITORY* for May and June. It is unnecessary for us to do more than refer our readers to the very decided, and more than usually successful, practice which this very zealous Physician pursued in the cases detailed in that important communication.

A case of this disease has also been published by Dr. O'BEIRNE,† which was treated successfully by injections of the infusion of tobacco. The subject of it, a boy of eight years of age, whose feet had been torn by machinery, experienced the accession of tetanus eight days after the accident. Turpentine injections had been given without benefit. On the fifth day of the disease, an infusion of a scruple of tobacco in half a pint of boiling water was administered as an injection. After four had been exhibited, in two days, considerable improvement was observed; and black, indurated fæces, and a dead lumbricus, about a foot in length, were discharged. The injections were continued for seventeen days, until the boy recovered.

In an interesting case of very acute traumatic tetanus, which we attended with Mr. LEESE, the tobacco injection was prescribed, and with the apparent effect of shortening the sufferings of our patient: he died very soon after its second exhibition, in a paroxysm of universal spasm, on the third day of the disease, and about twenty-four hours sooner than either of us anticipated before the second enema was given.‡

The treatment of *diseases of the digestive canal* has received several important additions from the communications with which we have been favoured during the preceding year. The case of *bulimia* by Dr. CRANE,|| and the singularly

* *Compendio di Osservazioni Cliniche, &c.* Del Dr. C. Birargo. Milano, 1822.

† *Dublin Hospital Reports*, Vol. III. p. 343.

‡ The particulars of this case, with the appearances on dissection, shall be laid before our readers.

|| *REPOSITORY* for April, 1822.

obstinate case of *ascarides* by Mr. NIELL,* are important, on account of the means which were so judiciously and successfully employed. The observations of Mr. FOSBROKE† respecting inflammation of the mucous coat of the intestines, have evinced the benefit which may be derived from the employment of cubebæ in this disease, especially in its more chronic forms. Mr. THOMPSON's‡ case of peritoneal inflammation, treated by the oleum terebinthinæ, illustrates not only the medical management of this ailment, but, in a still more striking manner, elucidates the nature of inflammatory disorders.

It would appear, from a paper lately read before the Washington Medical Society, that opiates and astringents were found to be the most successful remedies for the *dysentery* which prevailed, in the summer and autumn of 1820, at Hebron. Emetics and cathartics increased the sufferings of the patients: bleeding was occasionally of service, but only when febrile excitement was considerable. It seems that the Americans, as well as a very great number of ourselves, are only now beginning to find out the impropriety of applying acrid substances, such as emetics and cathartics, to a surface already inflamed and irritated to excess.

The employment of emetics in cases of obstinate *constipation* has been recommended by Dr. HOSACK. His observations have been laid before our readers in a former Number of this Journal.¶

The additions which have been made to our knowledge of the means of removing disorders of the *urinary and generative organs* have been but few. The advantages which are to be derived from the use of the *uva ursi*, in chronic derangements of the kidneys, have been pointed out by Mr. SPRAGUE§ and Mr. THOMPSON.¶ The *uva ursi* has also been prescribed with great benefit in *leucorrhæa*; and the cubebæ have been given with essential service in this disease by Dr. J. ORR.**

The ammoniated tincture of guaiacum has been lately exhibited in America by Dr. DEWEES, and, subsequently, in this country, for amenorrhœa, with complete success, after other means had failed. It was prescribed in full doses, three or four times daily; and its use continued for a considerable time.

* REPOSITORY for March, 1822.

† Ibid. for June, July, and December, 1822.

‡ Ibid. for April, 1822.

¶ Ibid. for July, 1822.

§ Ibid. for February, 1822.

¶ Ibid. for November, 1822.

** Edinburgh Medical Journal for April, 1822.

Glancing next at derangements of the respiratory organs, the very judicious treatment recommended in *laryngitis* by Dr. J. K. WALKER deserves an attentive perusal; for that purpose we refer our readers to some of our preceding Numbers. Dr. HARDER, of St. Petersburg,* has proposed the use of the cold affusion in the treatment of the adynamic stage of *croup*. This Physician had employed all the usual means, in the case of his own daughter, without benefit. He afterwards poured a pail filled with water of 12° Reaumur from the head along the spine. "The symptoms after the first time became a little better; and after the operation had been repeated, at intervals, ten times, the child became better and recovered." Dr. MILLAR, of the same city, has also cured a case of *croup*, in its last stage, with cold affusions.

The nitrous vapour has been used successfully in *pertussis* by Dr. J. D. THOMAS, of Philadelphia, in the case of his son, a child aged four years and five months, who had been labouring under the disease between two and three weeks.† The patient being laid in a very close bed-chamber, in which "a tea-cup was placed in a sand-bath, half an ounce of sulphuric acid was poured into the cup, to which an equal quantity of pulverized nitrate of potash was gradually added at such intervals as to occupy the space of an hour each night; by which means the room was kept filled with nitrous vapour, and respired by the patient, without exciting a paroxysm of coughing;" he generally fell asleep in the early part of the fumigation. The child was entirely freed from the disease after eight fumigations performed on successive nights. The general plan of treatment in this untractable and tedious disease has been satisfactorily stated by Dr. WEBSTER‡ in a contemporary Journal.

The treatment of *pneumonia* by large doses of tartarized antimony has been referred to at considerable length in some of our preceding Numbers.|| The advantages which are to be obtained from a more decided employment of this substance than we have hitherto resorted to, in diseases of the respiratory organs, appear to us to be very great. Like all other active remedies, its use requires a judicious discrimination; but when prescribed with due precaution, and with a strict reference to the pathological state of these disorders, and, moreover, when combined with other appropriate reme-

* American Medical Recorder, No. 19.

† Ibid. for October, 1822.

‡ Medical and Physical Journal for December, 1822.

|| For November and December, 1822.

dies, we are convinced that this remedy may be safely and most advantageously carried to a greater extent than has been usually supposed to be prudent. As far as our own observations warrant an inference, we consider that doses from an eighth to half of a grain, repeated every half hour, or every one or two hours, according to the circumstances of disease, or to the effects which we would wish it to produce, will be found of the utmost service. In this manner five or six grains may be taken in the day without inconvenience. The production of nausea, or even of full vomiting, is frequently desirable at the commencement of its use: and in the majority of ailments seated in the organs of respiration such an effect is desirable; BORDU, and many other Physicians who were guided in their practice by sound observation, placed the highest confidence in the beneficial result of a practice which was calculated to produce this operation.

The effects of tar-vapour in *consumption* have been again discussed during the preceding year. The observations of Dr. FORBES,* which were made with the intention of ascertaining whether its inhalation was actually beneficial in this disease, make it appear tolerably evident "that the cases recorded by Sir A. CRICHTON as having been cured by the tar-vapour were not genuine phthisis, but more nearly allied to chronic catarrhal affections." Dr. Forbes states, that, in genuine phthisis, it "rendered the breathing more difficult, and cough almost incessant: the expectoration was diminished, the pulse commonly accelerated, and anxiety and restlessness produced." Although the inhalation of the tar-vapour was found to be prejudicial in the tubercular phthisis, or where there were signs of active disorder of the vessels, Dr. F. entertained a more favourable opinion of its efficacy in that state of disease which consists in a morbid relaxation of the mucous membrane of the bronchial ramifications, giving rise to a preternaturally increased secretion. In this form of ailment, which generally succeeds to inflammatory action of the bronchiæ, it was found to be of very considerable service. In thirty-two such cases, eight were cured — six improved — eighteen were not affected by it — and it produced bad effects in none. Dr. Forbes concludes, that "the tar-vapour appears to possess stimulant properties, and perhaps astringent ones: it is therefore peculiarly well adapted as a remedy to restore the energy of debilitated absorbing or secreting vessels. Upon no other principle can we explain its apparent good effects on chronic catarrh, than by sup-

* Medical and Physical Journal for October, 1822.

posing that its stimulant power excites a new and salutary action in the mucous excretory vessels of the bronchiæ; and the very circumstance of its proving hurtful in phthisis, because the lungs and sanguiferous system are in a high state of excitement, tends very much to support this conclusion." The opinions of Sir A. CRICHTON, conveyed in his work on consumption, which has just appeared, shall be taken into consideration on another occasion.

Proceeding next to notice the additions which have been made to our means of curing diseases which affect the system generally, the employment of the subnitrate of bismuth, * of the prussiate of iron, † and the sulphate of quinine, ‡ in the treatment of intermittent and remittent fevers, merit attention. It would seem from the report of Dr. FRANÇOIS, § that amongst the different therapeutical means employed in the fever of Barcelona, that the sulphate of quinine, and the application of moxa on the lumbar region, deserved the preference.

The oleum terebinthinæ appears to be used successfully in Dublin § in certain forms of true puerperal fever: in the yellow fever of America ¶ it has been given with advantage. We have both prescribed it by itself, and conjoined it with other remedial means, with the most marked success, in the last stage of continued fever; when profound coma, sinking of the energies of the system, and other symptoms of the most imminent danger, left but little hopes of recovery from the exhibition of any other internal remedy, and led us to consider the use of this in the light of a last resource.

MATERIA MEDICA.—We cannot more appropriately introduce a view of the progress that has been made in this branch of medical science to the notice of our readers, than by stating the arrangement of several classes of medicinal substances that has lately been proposed by Dr. PARIS. ** Before we proceed, however, to notice these subordinate divisions, it will be proper to mention the general classification of medicines, according to their *modus operandi*, which has also been suggested by this able and scientific Physician.

* REPOSITORY for February, 1822.

† American Medical Recorder for July, 1822.

‡ The French Medical Journals, *passim*.

§ Nouveau Journ. de Méd., Juil. 1822.

¶ Dublin Hospital Reports. ¶ Chapman's Journal, 1822.

** Pharmacologia: comprehending the Art of Prescribing upon Fixed and Scientific Principles; together with the History of Medicinal Substances. By J. A. Paris, M.D., F.R.S., F.L.S., &c. &c. In 2 vols. Fifth edition, enlarged. 1822.

"The particular organs of the body," he conceives, "may be excited into action, through four distinct and different modes of communication:"—

I. By the actual contact of the appropriate remedy.

1. Conveyed by absorption, *without decomposition*.

Internally.	{	a.	Through the branches of the thoracic duct.
		b.	_____ of the vena portarum.
Externally.	{	c.	_____ of divided blood-vessels.
		d.	_____ of lymphatics.

2. Conveyed by absorption, *with decomposition*, by which one or more of its constituents are developed, and pass into the circulating current.

II. By an impulse conveyed by the instrumentality of the nerves.

III. By the sympathetic control exerted by the stomach on distant parts.

IV. By the operation of continuous sympathy, or of that which is excited by the mere proximity and continuity of parts.

The subdivision of the following classes of remedies, which Dr. Paris has adopted, deserves our particular notice.

Cathartics are very judiciously arranged by him in relation to three different modes of operation; viz.:—

"1. By stimulating the muscular fibres of the intestines, whence their peristaltic motion is augmented, and the contents of the bowels more quickly and completely discharged.

"2. By stimulating the exhalant vessels, terminating in the inner coat of the intestines, and the mouths of the excretory ducts of the mucous glands; by which an increased flow of serous fluids takes place from the former, and a more copious discharge of mucus from the latter; the effect of which is to render the faecal matter thinner and more abundant.

"3. By stimulating the neighbouring viscera, as the liver and pancreas, so as to produce a more copious flow of their secretions into the intestines."

Dr. Paris very justly observes, that there is "no tribe of medicinal agents more precarious in their nature and effects than that of *diuretics*; this fact, in a great measure, depends upon the uncontrollable character of the organs upon which they act, but it must, at the same time, be admitted, that their failure frequently depends upon their modes of opera-

tion being directly incompatible with the state of the system at the time of their administration."

The following classification of *diuretics*, which he has adopted, according to their supposed modes of operation, is well calculated to lead to more precise views in the employment of the individual substances composing this class of medicines.

CL. I.—MEDICINES WHICH ACT PRIMARILY ON THE URINARY ORGANS.

1. *By stimulating the secreting vessels of the kidneys, BY CONTACT.*

a. The medicines not undergoing any decomposition in transitu.

- | | |
|-------------------------------|-------------------------------|
| 1. <i>Potassa.</i> | 4. <i>Juniperus communis.</i> |
| 2. <i>Potassæ Nitræ.</i> | 5. <i>Cantharides.</i> |
| 3. <i>Oleum Terebinthinæ.</i> | |

b. The medicines undergoing decomposition in transitu.

- | | |
|----------------------------------|----------------------------------|
| 1. <i>Potassæ Acetas.</i> | 4. <i>Colchicum Autumnale.</i> |
| 2. <i>Potassæ Super-tartras.</i> | 5. <i>Copaifera Officinalis.</i> |
| 3. <i>Scilla Maritima.</i> | 6. <i>Spartii Cacumina.</i> |

CL. II.—MEDICINES WHICH ACT PRIMARILY ON THE ABSORBENTS, AND SECONDARILY ON THE KIDNEYS.

Mercury.

CL. III.—MEDICINES WHICH ACT PRIMARILY ON THE STOMACH AND PRIMÆVIÆ, AND SECONDARILY ON THE ABSORBENTS.

1. *By diminishing arterial action, and increasing that of absorption.*

- | | |
|----------------------|----------------------|
| 1. <i>Digitalis.</i> | 2. <i>Nicotiana.</i> |
|----------------------|----------------------|

2. *By increasing the tone of the body in general, and that of the absorbent system in particular.*

Bitter Tonics, &c. &c.

3. *By producing catharsis, and thereby increasing the action of the exhalants directly, and that of the absorbents indirectly.*

- | | |
|----------------------|----------------------------------|
| 1. <i>Elaterium.</i> | 2. <i>Jalap, &c. &c.</i> |
|----------------------|----------------------------------|

Diaphoretics have been subdivided in the same enlightened manner by Dr. Paris, and with a similar relation to the mode in which they occasion their effects:—

I. BY INCREASING THE ACTION OF THE CUTANEOUS VESSELS.

a. *By external application.*

The Stimulus of Heat.

- b. By Medicines that enter the circulation, and stimulate the cutaneous vessels by contact.

Mercurial Preparations.

Sulphur.

Saline Diaphoretics.

- c. By acting on the surface, sympathetically, through the medium of the stomach.

Cold Potations.

Antimonials, &c. &c.

II. BY INCREASING VASCULAR ACTION.

Violent muscular exercise.

Carbonate of Ammonia.

Guaiacum.

Alcohol, &c. &c.

Expectorants have also been arranged according to their supposed modes of operation :—

CL. I.—MEDICINES WHICH INCREASE PULMONARY EXHALATION, AND THEREBY DILUTE THE MUCUS IN THE FOLLICLES OF THE LUNGS.

- a. By removing constriction of the pulmonary exhalant vessels.

Nauseants.

- b. By stimulating these vessels by the actual contact of a medicinal substance.

Allium.

Fetid Gums.

Scilla?

The different Balsams.

CL. II.—MEDICINES WHICH DIMINISH THE INORDINATE FLOW OF FLUID INTO THE LUNGS, AND RENDER THE EXPECTORATION OF THE REMAINDER MORE EASY.

- a. By removing the debility of the exhalants.

Sulphate of Zinc.

Bitter Tonics.

- b. By increasing the power of the absorbents.

Digitalis.

Nicotiana.

- c. By determining to the skin by gentle diaphoresis.

Tartarized Antimony.

- d. By exciting serous discharges from the bowels.

Saline Purgatives.

CL. III.—MEDICINES WHICH OPERATE MECHANICALLY, IN PROMOTING THE REJECTION OF ACCUMULATED MUCUS.

- a. By stimulating the muscles of respiration.

Ammonia.

- b. By exciting vomiting, and thereby compressing the thoracic viscera.

Emetics.

We are happy to have it in our power to record these views, which, with other interesting materials, have enriched the last edition of the *Pharmacologia*.

At an early period of our periodical labours, we took occasion to throw out some observations respecting a physiological arrangement of medicines;* and we professed our regret that, amongst the otherwise excellent works on therapeutics and the *materia medica*, none attempted to inquire respecting the *modus operandi* of remedies. Since that period more attempts than one have been made to view, in a closer manner than heretofore, the action of medicinal substances upon the animal economy. The opinions of Dr. Paris on this important subject have been now partly stated. The illustration of them, in the work already referred to, is calculated to interest the scientific Practitioner.

A classification of medicines on nearly the same basis as that adopted by ALIBERT, but differing widely from it in many of the subordinate details, has been lately published by Dr. GRANVILLE.† Our readers will find, in one of our preceding Numbers,‡ the grounds stated, on which a new arrangement of remedies may be founded.

Having alluded to the opinions which have been lately entertained respecting the classification of medicinal substances, we proceed next to record the additions which have been made to their numbers; and here we shall not confine ourselves to the very few new remedies which have appeared, nor to the old ones that are reasserting their claims to notice, but will state, as briefly as we can, a few facts which relate to the novel application of some of those which are familiar to us.

The *sulphate of quinine*, for which we are indebted to the French chemists, appears to be a most valuable addition to our pharmaceutical preparations. The Numbers of the REPOSITORY for the preceding year have contained very satisfactory evidence of its great utility, and much more might be adduced.

The advantages which are to be derived from the employment of the oil of the *croton tiglium* as a cathartic and hydragogue, have been fully laid before our readers, in the interesting communications of Dr. GORDON SMITH, Dr. CARTER, and Mr. ILIFF; and the botanical characters of the genus to which it belongs, and of the nearly allied one, the *jatropha*, have been pointed out by Mr. FROST. The paper of Dr. NIMMO, in the *Journal of Science and the Arts*, has

* See REPOSITORY for February, 1822, p. 175.

† *Med. and Phys. Journ.*, April, 1822. ‡ For May, p. 380.

also tended to direct the attention of Practitioners to this oil. The native *Doctors* of Java employ the powdered root of the croton tiglium as a remedy in dropsy; and from the observations that have been made in this country, its oil appears to be one of the best hydragogue cathartics which can be given in dropsical disorders, when the state of the system or of the disease permits its exhibition.

The *cornus circinata*, or mountain willow, has been used with advantage as a tonic and astringent by Professor Ives, of America. He praises it highly in the treatment of the cholera infantum. Dr. HARRIS* gave it with advantage as a substitute for the cinchona in the remittent and intermittent fevers which prevailed in the neighbourhood of Philadelphia in the years 1820 and 1821.

Phosphoric acid has been recommended in jaundice and in other disorders, by a continental writer; but farther observations of its effects are requisite before we can make farther reference respecting it.

The preparations of *gold*, which, notwithstanding the efforts of M. CHRETIEN, and, subsequently, of other Physicians in France, Germany, and America, attracted but little attention, have been again introduced to notice by Dr. NIEL, of Marseilles, in a large octavo volume. The direct effects of these preparations, according to the observations of this Physician, are to exalt all the vital functions;—to improve digestion, increase the secretions, quicken the pulse, and to give vigour to the whole system. The muriate of gold and soda is considered to be the most efficacious preparation, and friction on the gums, tongue, or inside of the cheeks, the best mode of introducing it into the system. The diseases for which M. Niel recommends the gold are chlorosis, glandular swellings, goitre, fistulous ulcers, scrofulous ulcerations, and scrofulous ophthalmia, but, above all, in syphilis. The dose is, at first, a fifteenth or sixteenth of a grain, which may be gradually increased to a sixth of a grain. Professor LALLEMAND,† of Montpellier, has also written in support of the introduction of the preparations of gold into medicine, and has advocated their use in syphilitic affections, on the grounds of their producing no *morbid* change in the state of the health, as is the consequence of the use of mercury. Like this mineral, the gold causes ptyalism, but without the inconvenience of that which results from the use of mercury, and without any effect on the gums.

* Chapman's Philadelphia Journal for February, 1822.

† REPOSITORY for January, 1823, p. 85.

Charcoal has been exhibited by Dr. DICKSON * as an anti-emetic remedy in the last stage of yellow fever. It was found successful in allaying the irritability of the stomach, even when the black vomit had appeared. The dose was a teaspoonful every two or three hours. We have been informed by a good authority, that it is an excellent remedy in dysentery, and may be given with perfect safety, and generally with advantage, at any period of the disorder.

The *sedum acre*, or small house-leek, although long known in medicine, has been introduced to notice, in the American Medical Recorder, as a remedy of considerable efficacy in several affections of the skin. From the observations which ALIBERT has offered respecting it, in his Elements of Therapeutics, † it appears to possess considerable efficacy in scorbutic ailments, and in scrofulous and ill-conditioned ulcers. It is given internally in the form of decoction or infusion, and applied externally as an ingredient in poultices and dressings.

The use of *prussic acid* in impetigo, for which we are indebted to Mr. A. T. THOMSON, ‡ deserves attention.

The introduction of the *flowers* of the *colchicum autumnale* to the notice of Practitioners is due to Mr. FROST. § The discussion of the efficacy of this part of the plant will come before us on a future occasion.

According to M. VALLOT, § of Dijon, the juice of the *datura arborea* possesses the power of dilating the pupil to the same extent as that of *belladonna*. The latter medicine has been exhibited successfully by Mr. THOMPSON in the treatment of *neuralgia*. We must refer our readers to a former Number ¶ for the detail of the interesting cases in which this medicine was given with so much decision by that gentleman.

The *stramonium* has also been prescribed with success by Dr. EBERLE ** in a case of this disease.

Tobacco has been proposed as a remedy of great efficacy in acute inflammations by Dr. PAGE. †† This Physician adduces three cases in proof of its efficacy, in which an infusion of thirty-five grains of this substance, in twelve ounces of boiling water, was given as an enema. We have no doubt of the beneficial effects of this practice in several of the

* Chapman's Journal, Feb. 1822. † Vol. II. p. 243.

‡ Medical and Physical Journal for February, 1822.

§ REPOSITORY for December, 1822.

¶ Ibid.

¶ Ibid. for July, 1822.

** American Medical Recorder, No. 20, October, 1822.

†† Edinburgh Medical Journal for July, 1822.

phlegmasiæ; and consider that it deserves farther trial by the judicious and discriminating Practitioner. Empirical practice is the bane of our science, and does more to obstruct its progress, in its various departments, and especially in the treatment of diseases, than all the other causes which tend to produce the same effect; from such a source neither improvements in therapeutics, nor the confirmation of previous observations, can be received without the conviction that much more experience, and that of a very different description, is required.

The *dilute sulphuric acid*, in large doses, has been successfully employed by Mr. FOSBROKE in cutaneous diseases.*

The *podophyllum peltatum*, or May apple, has been noticed in two late Numbers of the American Medical Recorder† as being equivalent to jalap; and the *apocynum androsaemifolium*, or Canada dog's bane, as being equal to ipecacuanha.

The beneficial effects of *counter-irritation* and *artificial inflammations and eruptions*, in the treatment of many derangements affecting internal viscera, have lately excited a considerable portion of attention amongst us; and certainly not more than the subject deserves. In our review of Dr. JENNER's pamphlet on artificial eruptions, we brought the matter fully before our readers; we, therefore, refer them to the observations offered on that occasion.‡

The very excellent translation of LABREY's work on *moxa*, by Mr. DUNGLISON, has tended in no inconsiderable manner to direct medical attention to this very active agent, as well as to the general principles on which its efficacy depends. We understand that various instances of its successful application, consequent on the appearance of Mr. Dunglison's book, have occurred at Edinburgh.

A case which illustrates the utility of this practice has been published by Mr. OGDEN.¶ A child affected with epilepsy, cough, and copious expectoration, was accidentally burnt on the chest and belly, in consequence of its clothes having caught fire. The remedy was effectual;—the child was cured of all its ailments.

Dr. MARSH has published, in the third volume of the Dublin Hospital Reports, an instructive case of diabetes mellitus, wherein the use of the *opiated vapour-bath*, of flannel next the skin, and of exercise, so as to excite very copious perspirations, was resorted to with permanent success.

Amongst those remedies which are to be considered as

* Edin. Med. Journ., April, 1822. † Nos. 17 and 18.

‡ LONDON MEDICAL REPOSITORY for April, 1822.

¶ Medical and Physical Journal for August.

antidotes to the noxious effects of other substances, the use of the *cold affusion* appears to hold a very conspicuous rank. Its successful application in cases of poisoning by opium has been satisfactorily shown in one of our preceding Numbers.* The excellent instructions laid down by Mr. SPRAGUE,† for the medical management of similar cases, deserve attention and adoption; and the instrument invented by Mr. JONES,‡ a description of which has been laid before our readers,§ supplies the Practitioner with the means of drawing off both this and many other noxious substances from the stomach, and consequently of fulfilling the first indication of treatment in those cases. So fully has this subject been elucidated within the period assigned to this sketch, that we cannot help concluding, if an individual be lost from the ingestion of an excessive dose of opium, and the means just alluded to have not been employed by the Practitioner who had seen him under such circumstances, that very culpable ignorance and neglect have been evinced.

It appears from the observations and experiments of ORFILA and MAGENDIE,|| on the various preparations of opium, that it would be highly improper to administer acids, especially the acetic, in the treatment of cases of poisoning by this narcotic, until it is evacuated by vomiting. This arises from the circumstance that acids augment the energy of opium, while it remains on the stomach, by accelerating the solution of its active principle. But, when it has been removed, acids become beneficial. As, however, sulphuric acid neutralizes the deleterious properties of *morphia* much more than the acetic, it may be found to diminish the energy of a tincture present in the stomach, although vinegar would augment it. Therefore, the sulphuric acid appears to be the most proper, if the use of acids be adopted.

A very interesting case is recorded by Dr. FOGO,§ in which an ounce of the tincture of digitalis, prepared the summer before, from leaves gathered at the proper time, was taken in one dose. The patient had been labouring under a paroxysm of asthma, and, after a restless night, had swallowed the tincture at seven o'clock in the morning. He fell asleep immediately afterwards, and slept soundly for three hours and a half, "when he vomited a great deal, and likewise had an evacuation per anum, and very composedly afterwards resumed his bed, and the enjoyment of his repose."

* MEDICAL REPOSITORY for July, 1822.

† Ibid. for August, 1822. † Ibid. for October, 1822.

|| Nouveau Formulaire, &c. Paris, 1822.

§ Edinburgh Medical Journal for July, 1822.

About this time an emetic was administered; his pulse was then 80, and perfectly regular. At four o'clock he was tranquil, had enjoyed sleep, and his pulse was as before. At six o'clock he was quite easy, free from vertigo and nausea; "his pulse, in frequency and strength, was much the same, though every two or three minutes there was a light intermission." Strong punch was now given, in divided doses. At half-past eight the pulse intermitted more frequently. The carbonate of ammonia, and, subsequently, the liquor ammonia, were given "regularly every hour, and, in the intervals, the patient slept, upon the whole, tolerably composed; and when he was awake to take the draught, always assured us he felt no uneasiness of any kind." At eleven o'clock at night the pulse was 58; it kept falling irregularly until five in the morning, when it was 36. From that period it continued to rise, in a variable manner, until twelve o'clock, when it reached 75. Dr. Fogo refers to a case in which a patient took a teaspoonful without any alarming symptom. We could not expect any deleterious effect from such a quantity. We have taken a dram dose of the tincture, procured from a very respectable Chemist's in the Haymarket, without any marked influence on the state of the circulation; and we have given as large a dose to others, with effects varying according to the state of the system at the time of its exhibition.

The administration of gluten as an antidote to the corrosive sublimate has been already noticed.* The observations of Mr. MURRAY† tend to show, that ammonia is the most efficacious stimulant that can be employed in order to counteract the powerfully sedative effects of the prussic acid.

The test of arsenic recommended by Dr. COOPER,‡ of Columbia College, has been stated in a former Number.¶

SURGERY.—In the following brief sketch of the additions which have been made to this branch of the healing art, we shall confine ourselves to those matters which are of a practical nature, and which relate chiefly to the more important operations, and to the treatment of those disorders which are strictly surgical. As some of the more interesting observations connected with physiology and pathology, which have been already adduced, equally apply to chirurgical therapeutics; and as we are not aware of many important additions which have been made to surgical pathology that are

* REPOSITORY for December, 1822.

† Edinburgh Philosophical Journal, No. 13.

‡ Silliman's Journal, 1822.

¶ REPOSITORY for August, 1822.

applicable to this art alone, we shall proceed at once to take a cursory view of its practical improvements.

Commencing with these operations which require the application of ligatures on arterial branches, we shall first notice those which relate to the treatment of the surgical diseases of the head and neck, without confining ourselves to any other arrangement than that which is pointed out by the relative situation of the various parts of the body.

An interesting case, apparently of anastomosing aneurism, in which temporary ligature of the carotid artery has been lately employed without permanent advantage, has been recorded by M. MAUNOIR, of Geneva. The pressure on the artery was removed on the third day, when the vessel was found perfectly closed.* The instructive case of Mr. PATTISON, of Maryland, where the ligature of the carotid terminated favourably, and the anastomosing aneurism was extirpated with a successful result, shows the propriety of performing this operation even under unfavourable circumstances. The treatment of a variety of this disease, the *nævus maternus*, by excision, as it has been performed by Mr. LANGSTAFF and others, has been adopted with success in various instances during the preceding year.

The operation of tying the superior thyroid artery in bronchocele, as recommended by Sir W. BLIZARD, has been again performed with a favourable result by Professor WALTHER. The particulars attending it are detailed in a former Number.† Mr. COATES‡ had successfully performed the same operation in this country; and Dr. JAMESON, of Baltimore, has also practised it, in America, with a similar result.

The carotid artery has been tied by Dr. MOTT,§ in a young lady, on account of an osteo-sarcoma of the left jaw, which had existed above a year, and extended from the angle of the jaw to the first bicuspid tooth. Dr. Mott performed the excision of this tumour, having first secured the carotid artery by ligature. The wound of the cheek healed chiefly by the first intention; the ligature came away on the thirteenth day; and on the thirty-seventh day after the operation the patient returned, cured, to her residence in Long Island.

The same operation was again performed by Dr. MOTT,§ and the right carotid artery tied previous to the extirpation of another instance of this species of tumour from the right jaw, which was accomplished “ by sawing through the bone

* *Annali di Medicina*, 1821.

† *MEDICAL REPOSITORY* for October, 1822.

‡ *Medico-Chirurgical Transactions*, Vol. X.

§ *American Medical Recorder*, July, 1822. § *Ibid.*

at the situation of the second bicuspid tooth of the left side, and then by dissecting it from its articulation on the right :” thus removing the greater part of the lower maxilla with the diseased mass, which weighed twenty-two ounces, and equalled, in size, the head of a full-grown *foetus*. The patient, however, died on the fourth day after the removal of the tumour. A similar operation for osteo-sarcoma of the lower jaw had been previously performed by Professor GRAFE,* of Berlin.

The very instructive case of axillary aneurism by Mr. TODD,† of Dublin, for which the subclavian artery was tied successfully by this able Surgeon, furnishes a very marked proof of the advanced state of surgery at the present epoch. The patient, a robust and healthy-looking man, aged thirty-five years, entered Richmond Hospital with a tumour in the axilla, which not only “distended the axilla so as to cause the scapula to project considerably backwards, but it was particularly prominent anteriorly, its base extending upwards to the clavicle, which was much elevated; inwards to the edge of the sternum, downwards to the nipple of the breast, and on the side of the thorax to the upper edge of the sixth rib. The tumour was tense, elastic, and pulsating; the skin felt stretched upon it, but was not discoloured.” The sense of touch below the elbow was lost, and no pulsation could be distinguished in the radial or ulnar arteries of the diseased limb. The rapid increase of the aneurismal tumour induced Mr. Todd to have recourse to the operation, which was performed, on the 8th February, 1822, in the following manner:

“The patient was placed on a table, lying on his back, with the upper part of his thorax somewhat raised; his head and neck inclined to the left, and his right shoulder as much as possible depressed by an assistant steadily drawing down the arm of that side. A slightly curved incision was made through the common integuments across the lower part of the neck, commencing about two inches above the acromial, and terminating half an inch above and to the outer side of the sternal extremity of the clavicle. The convexity of this incision was downwards, so that by a little dissection of the integuments upwards, a small flap was made, which afforded ample room for the subsequent stages of the operation, and evinced the inutility of a more extensive, or a more complicated division of the skin.

“The next part of the operation consisted in dividing the *platisma myoides*, *fascia*, and subjacent cellular tissue; this

* Medical and Physical Journal.

† Dublin Hospital Reports, Vol. III.

occupied a considerable time, in consequence of the great number of veins which it was found necessary to secure with ligatures. The external jugular, and two or three other superficial veins, were easily secured, but a series of more deeply seated veins proved extremely troublesome; one branch of these in particular poured out blood in an alarming quantity, and receded so much within the layers of the fascia, that I was at last compelled to use the needle, and to include in the ligature the portion of fascia with which the divided vein was connected.

"I feel it incumbent on me here to state, that this profuse discharge of venous blood was chiefly the consequence of the veins having been divided too near the large trunk into which they opened; the blood therefore flowed freely in a retrograde direction from the subclavian vein into them, and issued from their inferior orifices; the bleeding from their superior orifices was inconsiderable and easily controlled. To have tied these veins individually, before dividing them, would have been an undertaking both tedious and difficult to execute, for they constituted a most intricate plexus of convoluted vessels, imbedded in cellular tissue and layers of fascia.

"The venous hemorrhage having been at last effectually suppressed, I proceeded to search for the omohyoideus muscle: so much, however, was the relation of parts altered by the magnitude of the tumour, and consequent elevation of the clavicle, that the portion of this muscle expected to be brought into view in this stage of the operation, was situated more than an inch below the clavicle; and it was found necessary to draw it up from its concealment, and to cut it across, that the subjacent parts might become accessible.

"Having applied my finger to the edge of the scalenus anticus, I was directed by it to the situation of the artery; but at this juncture causes of further difficulty arose, chiefly from the great depth of the wound, and the doubt which the almost total absence of pulsation in the artery naturally excited in regard to its identity. It is necessary, however, to observe, that this obscurity in the pulsation of the subclavian artery was by no means referrible to the debility or exhausted state of the patient, but probably depended on the vessel having been flattened upon the first rib by the degree of extension to which the aneurismal tumour in the axilla had subjected it.

"For some time I could not be convinced that the feebly pulsating vessel, to which the point of my finger was applied, was really an artery of such magnitude as the subclavian; and, aware of the disappointments which others were reported to have sustained in this operation, I resolved to

satisfy myself and my assistants upon a point of so much importance, before a ligature should be applied. The depth of the wound rendered it impossible to see to the bottom of it; accordingly I kept the point of my left fore-finger on the vessel, and cautiously detached it from its connexions with the blunt extremity of a director; having then introduced the fore-finger of my right hand also into the wound, I succeeded in compressing the vessel between the ends of my fingers, when the pulsation of the tumour immediately ceased, returning when the pressure was discontinued. This expedient was conclusive, and, for obvious reasons, more satisfactory than that of pressing the artery downwards against the first rib.

“ From the unusual degree of displacement of the clavicle, it was expected that great difficulty would have arisen in the application of the ligature to the artery; I was therefore provided with the several instruments which have been recommended to facilitate this step of the operation: however, none of these were employed, as the object was speedily effected with a common aneurism needle. At first I attempted to pass the needle in front of the artery, with the view of giving every security to the vein; to this the position of the clavicle constituted an insuperable obstacle; I therefore directed the needle along the margin of the scalenus, and then insinuated the point of it under the artery from behind, guarding the vein with the fore-finger of my left hand, until the point of the needle was sufficiently elevated. I was then enabled to seize the ligature with the extremities of my fore-fingers, which I had introduced into the wound, nearly in the same manner as when compressing the artery, and the needle being held by an assistant, one end of the ligature was drawn out anteriorly, and the needle was removed.

“ The knot was now tied, and a sufficient tightness ensured by the ends of the ligature having been passed in the ordinary way through the *serre-nœud*. On the ligature being tightened, the pulsation of the tumour entirely subsided; its tension was considerably diminished, and the patient felt an increased degree of numbness of the arm; the external wound was then dressed, and he was laid in bed with the limb supported on a pillow by his side.”

The very ingenious instrument invented by Mr. Weiss, for the ligature of this vessel, appears to be calculated to facilitate that part of the operation. It “ consists of a hook, the end of which contains a needle armed with a ligature concealed in it; the extremity of the needle projects a little beyond that of the hook, and is caught by a little pair of pincers, which is guided to it by slipping it along a groove in

the handle of the instrument."* Mr. TODD† has also recorded two unsuccessful cases of the ligature of the external iliac artery: a successful one has been published by Mr. SALMON.‡

The interesting instance of reunion of the osseous disc, separated by the operation of trepan, detailed by Professor WALTHER,|| and Mr. HARRISON's§ case of double hare-lip with separated palate bones, have been already laid before our readers. The beneficial employment of pyroligneous acid, by Dr. MOORE,¶ in a case of mortification, deserves the attention of Surgeons.

Dr. KENNEDY's very important memoir on the treatment of *bronchocele*, which was published in the Number of the REPOSITORY for March, is the most complete and satisfactory which has hitherto appeared upon this disorder. Its interest is heightened from the circumstance that it takes an impartial review of the various modes of treatment that have been recommended for this affection; at the same time, that it exhibits some instructive instances of their adoption, both in the practice of the author and of others.

The very interesting case in which bronchotomy was performed by Dr. HUNT,** of Dartmouth, in order to extract a pebble from the trachea, has been noticed in this Journal. Mr. WHITLY,†† of Halton, Cheshire, had previously resorted to the same operation, and extracted a damson-stone from the trachea of a boy, who is now alive.

Mr. WALLACE,‡‡ of Dublin, has recorded a very interesting case of tracheotomy successfully performed in a child whose larynx was inflamed in consequence of attempting to drink boiling water. It was found necessary to remove a portion of the rings of the trachea in order to admit the canula with ease. The same operation was undertaken by M. BRICHETEAU||| in a case of croup. The pseudo-membrane was removed from the trachea, but inflammation had evidently extended to the bronchiæ. The child died.

We have already recorded§§ a very singular case, present-

* Medical and Physical Journal for January.

† Dublin Hospital Reports, Vol. III.

‡ Medico-Chirurgical Transactions, Vol. XII.

|| REPOSITORY for June. § Ibid. for May.

¶ New-York Repository, January, 1822.

** Medico-Chirurgical Transactions, Vol. XII.

†† Medical and Physical Journal for November, 1822.

‡‡ Journal of Foreign Medicine, April, 1822.

||| Medical and Physical Journal.

§§ REPOSITORY for November, 1822.

ing eight large sarcomatous tumours, which occurred to M. DAGORN, the largest of which was extirpated by this Surgeon. Sir A. COOPER has likewise removed, with success, from the abdomen of a man, a tumour of this description, which had advanced to an immense size. A case of cartilaginous tumour of the leg, by Mr. WILLIAMS, has been laid before our readers.*

Cases, in which the Cæsarian section has been performed, have occurred to Mr. GREEN† and MM. HORN.‡ An account of that by Mr. Green has already appeared in our pages. The very interesting case in which this operation was performed by MM. Horn, father and son, proved successful. The mother and twin infants were saved. The operation was undertaken in consequence of a firm adhesion of the superior part of the vagina to the os uteri. An aperture of not more than an inch in extent was observed between the labia majora. The mother and both infants enjoyed good health nine months after this formidable operation.

Dr. CHARLES JOHNSON§ has treated successfully two cases of inverted uterus by ligature. The parts removed by this means proved to be the fundus of that organ with the insertions of the Fallopian tubes. The application of the ligature, in one of the cases, occasioned great constitutional disorder: it, nevertheless, proved successful.

A case of excision of the neck of the uterus has been recorded by M. AVISARD.¶ A woman, at thirty-seven years of age, contracted syphilis. A mercurial course of considerable length was followed by epilepsy. Seven years afterwards, a sense of heat was felt in the pudenda, with sharp pains in the loins and thighs, and general indisposition. On examination, considerable tenderness of the parts was apparent: there was no discharge; the neck of the uterus was swelled and hard, but not ulcerated; the body of this organ was healthy. On the 23d of March, 1820, M. Avisard, assisted by M. Drecq, placed the patient in the position for lithotomy. The neck of the uterus was brought forwards by the fore-finger of the right hand, while M. Drecq pressed upon the hypogastrium, and a double hook was passed into the os uteri as far as the thickening extended. The neck of the uterus was then slowly drawn to the mouth of the vagina,

* REPOSITORY for March, 1822.

† Medical and Chirurgical Transactions, Vol. XII.

‡ Hufeland's Journal, &c.

§ Dublin Hospital Reports, Vol. III.

¶ Journal Universel des Sciences Médicales, Mai, 1822.

and cut off by strong scissars. The separated part was hard and white, and its diameter equalled a five franc piece. Its anterior part was seven lines, and its posterior five lines, thick. Injections of oxycrat were used to diminish the slight hæmorrhage; the vagina was afterwards stuffed, and a bandage applied. The patient was placed in bed with her thighs raised. She was again examined on the twenty-first day, when a speculum uteri was used, and a small projection of this hardened substance was removed in the manner just described. Other portions were removed on two subsequent occasions, and dilute nitric acid applied to the cut surface by means of charpie. Considerable fever and abdominal disorder followed the first operation. Nine months afterwards the os uteri was found to be white, and but a little hard. The patient has continued well for twenty-seven months after the operation, and has experienced no attacks of epilepsy. Some slight uterine pains are felt only at the periods of menstruation.

The discovery of the means of removing stones from the bladder along the natural passage is due to the present epoch, and to the distinguished Surgeon to whose zeal for the advancement of surgical knowledge the Profession has been largely indebted. The twelfth and preceding volumes of the Transactions of the Medico-Chirurgical Society* contain ample details of the success of this practice, as it respects the dilatation of the male, and female urethra, and the removal of calculi, by this means, from both sexes. It may with justice be asserted, that few improvements in surgery, during the commencement of the present century, have equalled that which we have now considered.

Lithotomy by the rectum, as recommended and practised by M. SANSON, has been performed and approved by M. CAMOIN,† of Odessa. The impediments offered to his incisions, and to the subsequent steps of the operation, by the constriction of the sphincter ani, have been noticed by him, and the means of obviating them recommended. For this purpose "he suggests the expediency of previously introducing a dilating gorget into the rectum, which, by keeping back its posterior surface, and by enlarging the anus, allows greater space for the proceedings of the operation."

Mr. BOULTBEK's‡ case of lithotomy on a female illus-

* See reviews of these volumes in our Numbers for January, July, and August, 1822.

† Journal Complémentaire, March, 1822.

‡ LONDON MEDICAL REPOSITORY for April, 1822.

tates, in a satisfactory manner, the degree of utility which may be derived from the use of Mr. HEY's pad in the after treatment of such cases.

The very interesting and singular case of varicose veins recorded by Mr. BOND,* of Stoke-Newington, furnishes an important fact in illustration of the pathology and treatment of this species of derangement. The papers of Mr. LLOYD, on this subject, in the *Journal of Foreign Medicine*, deserve the attentive perusal of Practitioners.

Dr. KENNEDY and Mr. WALNE have laid before our readers the details of several cases of strangulated hernia, † which illustrate, in a satisfactory manner, that mode of procedure which a judicious Surgeon ought to follow under similar circumstances. To the young operator they furnish correct examples, which will be followed with advantage whenever cases of the same description come before him.

The treatment of dislocations and of fractures embraces two of the most important subjects that belong to the surgical art. The former of these will be considered when the very interesting and complete work of Sir A. COOPER comes before us; the facts which belong to the latter subject will now engage our attention.

Mr. DUNN, ‡ of Scarborough, has published cases of compound fractures, which present some important particulars. These have, however, been formerly noticed by us. The cases detailed by Mr. EARLE|| are important, although his attempts to procure reunion of the fractured extremities of the bones, by means of setons, caustics, &c. proved unavailing, owing to the particular circumstances connected with the individuals to whom the accidents occurred. Dr. DUCACHET, § in a case where the fracture had existed more than ten months, succeeded in procuring union to take place by means of a seton passed between the fractured ends of the radius.

The very important mechanical contrivance by Mr. AMESBURY ¶ for the treatment of fractures of both the inferior and superior extremities, deserves the attention of Surgeons. From the very correct principles on which the apparatus is constructed, and from the very successful application which has been made of it in the various kinds of fracture,—the recent and old, the simple and compound,—we consider it

* MEDICAL REPOSITORY for August, 1822.

† Ibid. for September and October, 1822.

‡ Medico-Chirurgical Transactions, Vol. XII.

|| Ibid.

§ American Medical Recorder, July, 1822.

¶ Journal of Foreign Medicine, No. 15.

the greatest improvement that has been introduced into this branch of surgical practice.

The apparatus consists of three pieces—the *first*, a thigh-piece, which is applied to the posterior part of the thigh, and which can be adapted to its length by means of the upper portion sliding in a groove in the lower part,—the *second* is applied to the back of the leg,—and the *third*, or foot-piece, to the sole of the foot. The first piece is connected with the second by means of a close hinge which is adapted to the flexure of the knee; the third, or sole-piece, is attached, by its posterior end, to the lower extremity of the second, or leg-piece, at the part where the heel rests upon it, forming with it a right angle, but admitting a hinge-like motion over the lower end of the leg-piece, and thereby forming more obtuse angles with the superior part. The sole-piece may be moved along the leg-piece, so that the latter may be adapted to the length of the leg. In order to fix the pieces intended to support the leg and thigh, and to allow of their being placed at different angles, a thin metal rod is connected, at both ends, by means of hinge-joints, to pieces of brass, one of which is attached to the leg-piece, the other is received into stops placed along the thigh-piece.

Our limits will not permit us to particularize the more minute and subordinate parts of the machine. The whole of it, however, is capable of being closely, firmly, and yet comfortably applied to the lower extremity, from the trochanter to the foot, by means of straps, tapes, &c.; and it appears to us fully to fulfil the following indications pointed out by Mr. Amesbury; and which he conceives a perfectly constructed apparatus for the treatment of fractures ought to perform.

“ 1. It should fix the whole limb, so as to admit of no motion whose centre is not in the hip-joint, or between the pelvis and the back. 2. It should maintain the fractured ends in a natural position, and in perfect coaptation. 3. It should lie upon the limb with ease to the patient. 4. It should enable the Surgeon to place the limb at any angle the case may require. 5. It should allow of the application of extension and counter-extension, when the limb is in the bent position. 6. It should be entirely passive to the motions of the limb, and should allow the patient to place it in any position most congenial to his feelings, either on the heel or on the side, and to alter this position at pleasure. 7. It should enable the attendants to move the patient from place to place, without any danger of displacing the fractured ends. 8. It should allow of being adapted to limbs of different lengths and different sizes. 9. It should be applicable to fractures in any part of the limb, and of all kinds, whether

simple, comminuted, or compound. 10. It should be simple and easy of application. 11. With all these advantages, it should ensure to the patient a speedy recovery, and a straight and perfect limb."

We cannot dismiss the subject of fractures without referring to the rare instances of fracture of the clavicle by muscular actions, which have been recorded by Mr. CHURCHILL.* A case of this accident arising from the same cause has also been very lately published in a French Journal.

The excellent paper, by Dr. KNOX,† on the pathology and treatment of necrosis, deserves an attentive perusal. This very intelligent pathologist concludes, that in no dissection, performed by himself or others, has the new bone, in cases of this disease, been found to depend, for its origin, on the periosteum or surrounding soft parts, but, on the contrary, it has uniformly appeared to be a secretion from that portion of the old bone which remained alive.

Mr. Churchill's memoir on gonorrhœa‡ has already engaged the attention of our readers. We can merely refer to it on this occasion. It will be observed that he reprobates the employment of the Java pepper in the inflammatory stage of the disorder, and proposes a method much more calculated to allay this species of derangement.

Dr. HILL's§ paper on the treatment of syphilis offers a well digested view of the subject; but it presents us with nothing beyond what Guthrie, Thompson, Hennen, Bacot, Rose, and others, have lately furnished us on the same topic.

The article *Chancres*, by M. LAGNEAU, in the fifth volume of the *Dictionnaire de Médecine*, is the most complete treatise that has hitherto appeared on the subject. §

* MEDICAL REPOSITORY for April, 1822.

† Edinburgh Medical Journal for January, 1822.

‡ REPOSITORY for August and September, 1822.

§ Edinburgh Medical Journal for October, 1822.

§ The length of this sketch, and the other arrangements of the Number, prevent us from delineating the progress of MIDWIFERY, CHEMISTRY, BOTANY, and LEGAL MEDICINE, during the preceding year. Our historical sketches will in future appear every half year—introductory to each volume, and in them shall be included the progress of those departments of science which we have been obliged to omit on this occasion.

II.

Reasons for concluding that the Doctrine of Contagion in Epidemic and Pestilential Diseases was wholly unknown to the Ancients; and that the generic term Plague is improperly applied to particular Pestilences: in refutation of the grounds upon which the Royal College of Physicians of London founded their Report to the Privy Council, dated March 31st, 1818. By CHARLES MACLEAN, M. D., Knight of the Spanish Order of Charles III.; Member of the Medical Academies of Madrid, Barcelona, &c.; commissioned by the Spanish Government to examine the Fever of Barcelona, in 1821.

“The additional proofs which would be required of the non-existence of contagion, must be such *proofs* as would be sufficient to counter-balance the general *opinion* of medical and philosophical authors and historians, from the times of Thucydides, Aristotle, and Galen, to the present day.”—*Report of the College of Physicians to the Privy Council concerning Dr. Maclean's work upon Epidemic Diseases, dated March 31, 1818.*

SINCE opinion can neither annihilate that which exists, nor give existence to a non-entity, the solution of the minor problem, whether the doctrine of contagion, in epidemic diseases, was known to the ancients, cannot be essential to the determination of the main question, whether a specific contagion be, or be not, the cause of pestilential maladies. The validity of that doctrine being disproved, if every person, who has existed from the beginning of the world to the present day, had uniformly maintained its correctness, it would be nothing to the purpose. But, as the assumption of the authority of the ancient Physicians, in this respect, has been made the chief ostensible reason for refusing to acknowledge the validity of doctrines of a very different nature, which I have offered to public notice, on this important subject, it may be useful to show, that this allegation is as destitute of foundation as every other part of the system of contagion, in epidemic diseases; that there is nothing in history, either sacred or profane, which can justify the conclusion, that the idea of the propagation of any disease, by means of a specific *virus*, was known to the ancients; and *à fortiori*, that such a doctrine, as applied to pestilential maladies, could not, by possibility, have been entertained by them.

Although, for a period of three thousand years, *i. e.* from fifteen hundred years before, to fifteen hundred years after, the Christian era, the records of all nations have presented an

almost continued succession of pestilences, yet history, both sacred and profane, has preserved a profound silence respecting contagion as a cause of those calamities. In the year 1491 before Christ, in the reign of Amenophis or Sesostris, we read of a distinct pestilence in Egypt. In 1460, we find it afflicting the Israelites in the wilderness of Arabia Petrea.* In 1308 before Christ, almost nine hundred years before the so much talked of plague of Athens, the Peloponnesus, during the invasion of that country by the Heraclidæ, and their expulsion, was affected with a destructive pestilence. † In 1265 before Christ, if we are to believe the records which relate to the siege of Troy, a pestilence prevailed in the Grecian army which were encamped before that city, and in Crete, on the return of Idomeneus and Merion from the war. ‡ In 1060, it ravaged Greece and Asia Minor generally. § In 1064, after the defeat of the Israelites at Ebenezer, the Philistines at Ashdod were smitten with a plague called the emerods, which some think meant hæmorrhage (dysentery). ¶ In 1040, towards the end of David's reign, after a three years' famine, a pestilence afflicted Judea, which is in another place more fully treated of. ¶ If we consult Herodotus, Diodorus Siculus, and other historians, we shall find that pestilences have afflicted various countries with various degrees of frequency, in ancient as well as in modern times. Rome, from its very foundation, was subject to epidemic diseases. They prevailed repeatedly, or almost continuously, from 433 to 425 before Christ. About this period, or from 431 to 428, occurred the memorable plague of Athens, recorded by Thucydides, Diodorus Siculus, Paulus Egineta, Plutarch, and others. In 587, Jerusalem was afflicted with a grievous pestilence. In 404, or twenty-four years after the plague of Athens, the great Carthaginian army, employed in the siege of Syracuse, composed of upwards of 300,000 men, were almost all destroyed by pestilence. In 396, a few years later, Rome was afflicted with an epidemic, which proved very destructive; and in 166 after Christ, under Marcus Aurelius, and in the time of Galen, it was again visited by a pestilence.

In those countries which, in the days of their splendour, were comprehended in the dominions of Greece and Rome, these scourges, during the first 1500 years of the Christian

* Numbers, xi. 33, and xvi. 46—50.

† Rollin, *Hist. Anc.* t. ii. p. 510.

‡ Homer.

§ Voyage de Jeune Anach. en Grèce, t. vi. p. 202, t. vii. table 1 des époques.

¶ 1 Sam. v. 6.

¶ 2 Sam. xxi. xxiv.

era, increased in frequency and severity, in proportion as these countries increased in barbarism, or diminished in civilization.

In all parts of holy writ where pestilence is mentioned, it is considered in no other light than as a plague, or judgment, sent from God; and it is, accordingly, sought to be removed or averted solely by sacrifices and atonements. The pestilences that were sent as judgments on Pharaoh and the Egyptians have been elsewhere spoken of. In like manner, we find the plague of pestilence sent upon the Israelites for the part which they took against Moses, in the rebellion of Korah: "And the Lord spake unto Moses, saying, Get you up from among this congregation, that I may consume them as in a moment. And they fell upon their faces. And Moses said unto Aaron, Take a censer, and put fire therein from off the altar, and put on incense, and go quickly unto the congregation, and make an atonement for them: for there is wrath gone out from the Lord: the plague is begun. And Aaron took as Moses commanded, and ran into the midst of the congregation; and behold the plague was begun among the people: and he put on incense, and made an atonement for the people. And he stood between the dead and the living, and the plague was stayed. Now, they that died in the plague were fourteen thousand and seven hundred, beside them that died about the matter of Korah (those upon whom the earth closed). And Aaron returned unto Moses unto the door of the tabernacle of the congregation: and the plague was stayed."*

Pestilence, famine, and the sword, are the judgments sent upon Jerusalem and Israel for their idolatry.† We also learn distinctly what kind of pestilence it was with which Israel was afflicted: "I have sent among you the pestilence after the manner of Egypt;"‡ and in 2 Sam. xxiv. 17—25, we have an example of the manner of atonement that was usual upon such occasions.

Now, if we suppose small-pox to be sent as a judgment, and that sacrifices and atonements are made, would any person, in his senses, knowing or believing the disease to be communicable by contact, unless he wished to be seized with the malady, neglect the employment, at the same time, of such means as he might think calculated to prevent the spreading of the infection to himself or others? But no such precautions were taken with respect to pestilence by the ancients. The inevitable conclusion, then, is, either that the ancients were wholly unacquainted with the doctrine of con-

* Numb. xvi. 46—50. † Ezek. v. vi. and vii. ‡ Amos, vi. 10.

tion in epidemic diseases, or disbelieved in it; or that, believing in it, they were insane enough to neglect all means calculated to prevent the introduction or spreading of the calamity.

Thus we find, that, in the sacred writings, pestilence, with every other species of calamity comprehended under the term plague, are expressly and unequivocally regarded as judgments from Heaven, and the proper and only means of preventing, mitigating, or removing them, deemed to consist in sacrifices and atonements. To suppose the total silence of the ancients, respecting such precautions as would inevitably result from a belief in the doctrine of contagion, compatible with a knowledge of that doctrine, is to suppose the ancients, if not absolutely insane, either wholly destitute of common sense, or, at least, extremely inconsequent. For my part, I am altogether at a loss how a person can be said to believe or to disbelieve in that of which he has never heard, or which has never presented itself to his mind. But the advocates of contagion, who appear to think themselves privileged to assume every thing favourable to their cause, whilst they would require their opponents to prove a negative, have informed us that the ancients did *not* disbelieve the doctrine of contagion, whilst they have not thought it necessary to show us that they had any knowledge of it. Indeed, it is very evident that they had not: for, in the whole writings of Hippocrates, *the principal part of which concerns epidemic diseases*, there is not a sentence or a word, which, even by the most forced construction, can be supposed to refer to contagion. But we shall be told by the partisans of this doctrine, following their usual modes of probation, that, because the Scripture is silent respecting contagion, the pestilence "*after the manner of Egypt*," of which the prophet speaks, *cannot be the same with the Egyptian pestilence of the present day*; and that, because Hippocrates is silent respecting contagion, *he could not have had any experience of the plague*.^{*} Hippocrates and Galen having been, in fact, reproached, by the fautors of contagion in the sixteenth century, for their silence, Facio, who wrote against this doctrine, in 1579, defends them, by saying, that "they ought not to be blamed for not having believed that, a thousand years after-

* All these absurdities have, in fact, been affirmed or insinuated. Hippocrates and Sydenham receive no quarter from our enlightened collegians of the present day: and one contagionist has absolutely ascertained that contagion was first discovered by the luminaries of the sixteenth century. What an era for discovery!

wards, so strange an opinion should have entered the minds of men."*

The following, amongst others, are my reasons for concluding, that the doctrine of contagion, as a cause of epidemic diseases, could not have been known to the ancients, and *à fortiori*, that it could not have been believed by them.

1. If such a doctrine had been at all promulgated, it is not probable, as, after nearly three hundred years from its origin, the question is not yet set at rest among the moderns, that it would have been at once implicitly received among the ancients by a species of tacit assent. 2. In such a case, it is utterly impossible that some authors should not have written professedly and at large in its favour. 3. It is equally impossible that other authors should not have written expressly and fully against it. 4. A doctrine so influential must, in some shape, have been a theme of universal remark amongst writers upon epidemic diseases or general medicine. 5. It is quite impossible, if this doctrine had been known, that corresponding precautions should not have been proposed and agitated. 6. It is equally impossible, if it had been believed, that such precautions should not have been adopted. 7. If they had been adopted, some traces of them must have remained. 8. Thus, not only the doctrine itself, but the precautions necessarily emanating from it, could not fail to have been recorded and amply discussed, both in sacred and profane history, and more especially by medical writers among the ancients, if they had really existed or prevailed. Of their non-existence, universal silence is sufficient proof.

The partisans of the doctrine of contagion as the cause of epidemic diseases, have shown a happy talent at converting every thing into a confirmation of their favourite hypothesis. Thus "unclean" in the Scripture, a term used in reference to religious ceremonies, and applied equally to many things, has been inferred by some of them to mean certainly contagion. Let us examine this matter in a reasonable way; and begin by quoting the words of Scripture: "Nevertheless these ye shall not eat, of them that chew the cud, or of them that divide the cloven hoof; as the camel, and the hare, and the coney: for they chew the cud, but divide not the hoof; therefore they are unclean unto you. And the swine, because it divideth the hoof, yet cheweth not the cud, it is unclean unto you."† Of fish and of birds, those that are clean and unclean are also specified:‡ and it is declared, that "ye shall not eat of any thing that dieth of itself," &c. || It is,

* Paradoxes sur la Peste, pp. 152, 153.

† Deut. xiv. 7, 8. ‡ Verse 9—20. || Verse 21.

then, quite obvious, that nothing can be more absurd than to say, that an *unclean* person, or an *unclean* thing, in the sense of the Scripture, can, by possibility, be interpreted to mean an *infectious* person or an *infectious* thing, in the sense of the doctrine of contagion; otherwise, we must suppose, that men and women in very natural conditions, and pigs, hares, &c. in all conditions, are to be considered infected, and capable of communicating disease to men and animals ad infinitum!

In consulting Deuteronomy and Leviticus on uncleanness, we shall find all these matters distinctly explained. In respect to a house that is unclean from leprosy, these are the directions: "And he (the priest) shall break down the house, the stones of it, and the timber thereof, and all the mortar of the house; and he shall *carry them* forth out of the city into an unclean place."*. If there had been any idea here of contagion, surely the priest would not have been directed to place himself in the way of being infected, or of infecting others by *carrying* it. The legal duration of uncleanness is also fixed: "Moreover, he that goeth into the house all the while that it is shut up, shall be unclean *until the even*."† This period of a few hours, it is quite obvious, can have no relation to the modern ideas of quarantine. This disease is also called the plague: "And if the priest shall come in and look upon it, and behold *the plague hath not spread in the house, after the house was plastered*: then the priest shall pronounce the house clean, *because the plague is healed*."‡ Then follow the directions for cleansing the house, which certainly do not apply, in the most remote manner, to the removal of any thing literally contagious, in the sense of the modern doctrine, concerning the propagation of epidemic diseases by means of a specific *virus*. To those who quote Scripture in defence of that doctrine, then, I would apply the words of Job, upon a different occasion: "But ye are forgers of lies, ye are all Physicians of no value. O! that ye would altogether hold your peace; and it should be your wisdom!"§

Let us next inquire, among their profane writers, what grounds exist for supposing that the ancients were acquainted with the doctrine of contagion in epidemic diseases. That the terms of the controversy might not be subject to be misinterpreted or misunderstood, I think it right to say, that, although I understand, with Le Clerc, the era of antiquity to terminate with the fifth century, I have, however, no objection, in order not to leave any room for the advocates of

* Levit. xv. 45.

† Ibid. 46.

‡ Ibid. 48.

§ Ibid. xvii. 4, 5.

contagion to complain, to give them the thousand years of darkness that succeeded into the bargain.

We shall begin with the Physicians. Hippocrates, the father of physic, has not, as I have already observed, a sentence, or a word, in any part of his works, which can, by the most forced interpretation, be construed to refer to contagion. I am not sure whether Celsus has not been quoted as a contagionist. But Galen has certainly been made to run away from Rome to Pergamos, in order to avoid the contagion of plague,—thus always mistranslating pestilence. Unfortunately for these casuists, it happens, that Oribasius, Ætius, Alexander, and Paulus, the Greek Physicians who immediately succeeded Galen, who imitated him in all things, and in many almost literally copied him, do not treat of any such doctrine in their works. The same thing is also true of the Arabian Physicians. It must appear strange, if Galen was a contagionist, or if he had referred to that doctrine only casually or incidentally, that these his followers, copiers, and imitators, should not only not have enlarged upon it, either for or against, but should even have omitted all allusion to a system so remarkable and influential. If the slightest allusion to it had appeared in the genuine text of Galen, would it alone, of all his doctrines, have been deemed unworthy of notice or imitation? Would it not necessarily have been announced, by his followers, even in justifying their silence regarding it? Would it not have been adverted to by the Arabian Physicians, even if they themselves, on account of their religious prejudices, could not give it their assent? But if, in the face of all these impossibilities, words or sentences should be found in some of the editions of Thucydides, Aristotle, or Galen, as has been alleged by some advocates of contagion, seeming to indicate, on their parts, a knowledge of this doctrine, is it in no way to be accounted for, but by assuming the text to be genuine, or the doctrine to have been entertained? Many corruptions of the texts of ancient writers must have happened from accident, or the carelessness of editors or transcribers. But, in this case, I shall show, that, if they did not happen by accident, they must have happened by design. Thus, whilst we perceive it to be quite impossible that such texts, imputed to the ancients, could be genuine, we are able satisfactorily to account for their adulteration. Of this the more recent advocates of contagion might have been aware, if they had attentively consulted the excellent work, upon the History of Physic, of their learned predecessor Dr. Friend. “How much they (the Arabians) *pervorted* or *interpolated* the Greek originals, instead of rendering the precise sense, sufficiently appears by the

many tracts of Galen (at least they are ascribed to him), which are pretended to be translated in the Arabic, and which are not extant in the Greek." * And if the Arabians took these liberties, should we expect the editors or transcribers, monkish or medical, of the sixteenth century, in superintending the printing from Greek manuscripts, or in translating from them, or perhaps in retranslating from the Arabian translations, should be much more scrupulous, having so important a purpose to serve as the support of the infallibility of the Pope? Dr. Friend says, that a whole book upon urines, † and that an entire treatise concerning the cure for the stone, ‡ is falsely ascribed to Galen. In speaking of the works of Palladius, some of whose manuscripts are to be found in the library of Vienna, under the names of Theophilus and Stephen, but none in his own, he observes: "You see here an instance how little stress is to be laid upon the titles, as they are often set down in manuscripts; which frequently carry the name of this or that author, as the wrong judgment, the fancy, or *some secret view* of the transcriber happened to lead him." § And if, whilst works were circulated only in manuscript, some authors could be accommodated with whole treatises which did not belong to them, and others deprived of those which were their composition, how much more easy must it have been to omit, to alter, or to add, in respect to particular words or passages, in order to serve a purpose? The facilities of interpolation afforded in the sixteenth century, in the course of printing, or editing, or transcribing ancient manuscripts, were unusually great: and will it be doubted, that, when thought expedient, they were embraced? What difficulty is there, then, in believing, that expressions purposely introduced by the contagionist editors or transcribers of the sixteenth century, into the writings attributed to Galen, may be now adduced by the contagionist controversialists of the nineteenth century, in proof of that doctrine having been known to and believed by the ancients? This reasoning, of course, equally applies to Thucydides, Aristotle, and every other ancient author to whom such doctrines have been attributed. I do not say, that editions of their works, containing words which may seem to allude to this modern doctrine, may not be found, or may not be made. What I mean explicitly to affirm, is, that such expressions cannot possibly have come from the pens of these ancient writers; and I do not believe that they are to be met with in

* Hist. of Physic, II. 24.

† Ibid. I. 269.

‡ Ibid. I. 249.

§ Ibid. I. 247.

any edition of the ancients printed before the middle of the sixteenth century, or, at any rate, before the year 1547.

Interpolation, then, in so far as the expressions quoted might fairly admit of the interpretation given to them, which, however, is far from being clear, would be sufficiently credible, and fully adequate to account for the confusion which has arisen upon this subject; whilst it is utterly impossible that the doctrine of contagion could have been known to the ancients. For, is it credible, to any person of common sense, that Physicians, at any period, if they had but simply surmised the possibility of the existence of such a cause of pestilence, would have been content to have merely alluded to, or slightly glanced at a doctrine of such extraordinary interest and importance to mankind, and without even proposing any of those measures of precaution which would obviously have resulted from that belief? Would not the ancient Physicians, if they had known and believed in the doctrine of contagion as a cause of epidemic diseases, necessarily have entered into some detail respecting such means as would naturally have occurred to them, for preventing the introduction and spreading of so terrible a calamity? And, if they had entertained the same views of the subject, as they were not probably much less ingenuous than the moderns, would they not have conceived, suggested, and enforced, all the modes of separation, seclusion, and restriction, practised by Christian communities from the middle of the sixteenth century? Palpable proof of the existence of the belief in contagion, if it had prevailed, must have appeared in the adoption, by the governments and municipal bodies of antiquity, of the measures of precaution which they would have deemed necessary to the public safety. But all such evidence being wanting, it can only be inferred, that the ancient Physicians, if they really did know and believe in the doctrine of contagion, must have been the most inconsequential, foolish, or insane persons, that ever appeared upon the face of the earth. Their folly or insanity must also have been contagious, and infected other persons: for, would not correspondent precautions have been partially resorted to by the people, if such a doctrine had been popularly, or even partially entertained; and, not to speak of philosophers and rhetoricians, would not historians have recorded these precautions, and poets sung their happy results? But, have we not evidence of the direct contrary of precaution, in the festivals of the *lectisternium*, to be afterwards mentioned, so commonly observed by the Romans, about and after the times of Hippocrates, Thucydides, and the memorable plague of Athens?

The fact is, that no ancient Physician, nor any Physician previous to the sixteenth century, did entertain this extraordinary and monstrous belief. It is certain, if we may credit the testimony of his own works, that Hippocrates did not; and, if Galen had, would he not have expressed his surprise at the silence of Hippocrates? It seems incumbent upon those who persist in maintaining that the doctrine of contagion was known to the ancient Physicians, to show at what period it commenced, and by whom it was introduced. This, however, preferring random allegations, as better suited to their purpose, they will not probably attempt. But I have already saved them much trouble on this head, by showing the precise period which, and the person by whom, this doctrine was first formally promulgated, as well as the public authorities by which it was first accredited.

Although the doctrine of contagion, as a cause of epidemic diseases, had never hitherto been disproved, many persons have contended that it was not known to, and, consequently, could not have been believed by, the ancients: "Non facile invenias," inquit Heurnius, "nomen contagii apud antiquos auctores physicos et medicos. Apud historicos et poetas, invenias contagium, contagem, contagionem, et contactum: nullus tamen veterum scripsit quid illud sit."* Mercurialis, as I have elsewhere stated, affirms, that, after much research, he has been unable to find any mention of such a doctrine among the ancients. Neither is there any trace to be found of such a belief among the Arabian Physicians as late as the twelfth century. Dr. Patrick Russell, without denying the truth of this remark, endeavours to evade its force. With respect to the Greek Physicians, he refers us "to those who have been at some pains in the inquiry;" and, with respect to the Arabians, admitting the fact of their silence respecting contagion, he endeavours to explain it away, especially with respect to Rhazis and Avicenna, by alleging, that "very substantial reasons might be assigned for both, as Mahomedans, being silent on the subject of contagion."† What these "very substantial reasons" are, he has taken care not to specify. Do the Mahomedans, then, deny that the small-pox depends upon contagion? On the contrary, were we not first made acquainted with the laws of this disease by the Arabian Physicians, and especially Rhazis and Avicenna? But, if there had ever been any reason connected with their religion why the Mahomedans should deny the existence of contagion

* Vol. II. lib. de Peste, c. iii. p. 74.

† Treat. of the Plague, p. 331.

in the plague, would they not have deemed it still more incumbent upon them to have refuted these notions, if they had found them in the Greek or Roman writers upon medicine? They are, however, totally silent; and their silence, if there were no other, would alone be sufficient proof that such notions are not to be found in the writings of the ancients; or, if to be found in any of the works imputed to them, that they must have been spuriously introduced since the era of the Arabian writings to which I allude.

(To be concluded in our next.)

III.

Observations in Practical Pathology, No. VIII. — Sketches of Cases wherein the Essential Oil of Turpentine was administered for the Expulsion of Intestinal Worms. By JAMES KENNEDY, M.D., of Glasgow.

ESSENTIAL oil of turpentine, on the evidence of diversified observation and experience, may now be regarded as one of the best and most certain means of procuring the expulsion of intestinal worms. These sketches are consigned to the repositories of practical pathology, with the object of contributing additional illustration of the virtues of a medicine so diffusive in its influences, and so efficacious by its powers.

Case 1st. March, 1815. — R. H., a lad in his sixteenth year, had already been two days sick and confined to bed. His disease, on examination, now displayed the chief symptoms of inflammatory fever, — pain in the frontal and temporal regions, in the course of the spinal column, and along the centre of either thigh; thirst, gastric irritation, and constipated bowels; dry mouth, furred tongue, parched skin; pulse strong and accelerated; abdomen tumefied and intolerant of pressure; eye suffused and glossy, with dilated pupil, and great impatience of light. Twenty-four ounces of blood were taken from his arm, and a strong dose of calomel and jalap prescribed.

Next morning the symptoms were aggravated. During the night the patient was hot and agitated, and unable to sleep. He had three scanty liquid stools, and was much distressed with tenesmus and headach. At three different times, imperfect convulsions supervened, and these were preceded by grinding of the teeth, muscular spasms, flushings of the face, muttering, moaning, and horror. Reflection on the assemblage of morbid signs induced me now to ascribe to the fever a sympathetic character, and to refer its development to the ascendancy of verminous irritation.

This case being deemed favourable for a trial of the anthelmintic powers of oil of turpentine, an ounce of that medicine, in a sufficient quantity of sweetened milk, was administered at noon, and another dose of the same strength, with an equal proportion of castor-oil, in a similar vehicle, at the end of four hours. About five o'clock, P. M., the patient began to experience severe gripes, with giddiness and intellectual confusion. Before six, a profuse perspiration took place, and the functions of his bowels were actively resumed. With much pain and straining, he obtained a copious discharge of liquid, acybalous, muculent* *scæces*, along with which, an interwoven mass, composed of twenty-one *dead lumbrici*, and a countless number of *ascarides*, was expelled. The largest of the former measured eleven and a half inches in length, and, at the thickest, seven-eighths of an inch in circumference. Many of them were eight, the shortest three inches long. Five more of the first species were ejected in the evening, two during the night, and three on the following morning. Of the second, the number was very great. The worms, as well as the accompanying *scæces*, were strongly impregnated with a terebinthinate odour.

Half an ounce of castor-oil, in an anodyne draught, was exhibited at bed-time, and the young man enjoyed moderate rest through the night. His febrile symptoms gradually subsided; and in a few days, with the use of an occasional laxative, his health was confirmed.

Case 2d. September, 1815. — Mr. C., married, and in his thirtieth year, requested my advice. This person is tall, fair, and thin. His habits are temperate, but he is considerably emaciated. His complaints are attended with the usual symptoms of alvine irritation. There is a perpetual sense of cold in his abdomen, accompanied with spasmodic twitchings in the umbilical region. His respiration is heavy and fitful; the odour of his breath and perspiration sourish and foetid. He is teased with an incessant tickling of the pharynx, occasioning a dry, hoarse, frequent cough. The mucous membrane of his nostrils is overspread with the particles of *

* "C'est une erreur accréditée parmi les personnes qui, à toutes sortes de titres, ont soin des malades, que les vers peuvent être expulsés dans un état de décomposition ou de fonte, soit par l'effet des médicamens, soit même par les seules forces de la nature: cette opinion doit être laissée aux nourrices et aux garde-malades: ces prétendus vers fondus ou hachés ne sont autre chose que des mucosités intestinales légèrement coagulées, ou des fragmens des substances alimentaires filamenteuses." — LAENNEC.

furfuraceous exudation. His urine has a milky appearance and consistence. His pulse is hard, rapid, irregular, intermittent. Violent palpitations of the heart often fill his mind with alarm; and he is debilitated by profuse discharges of blood from the nose.

At intervals, during the greater part of his life, this man has experienced distress from the excitement of alvine worms. Almost every remedy accounted vermifuge, whether of charlatanical or scientific prescription, has been tried by him, without permanent benefit. Among others, the celebrated nostrum of Madam Nouffer, though submitted to fair and repeated experiment, was unavailing, and left him despondent of relief. He now consented to use the oil of turpentine as a last effort for health, and professed himself ready to take it, in whatever form it might be prescribed.

Conformably to this resolution, he swallowed two ounces of the medicine, in an aromatic solution of gum arabic, at the time of going to bed. Early in the morning, he awoke with oppressive headach, accompanied by giddiness, confusion of mind, and general agitation. An ounce of castor-oil, in a glassful of acidulated water, being now given to him, he replaced himself to rest. At the end of two hours, severe pains in the abdomen, which was much distended, and incapable of bearing the gentlest pressure, aroused him from an unrefreshing sleep. Forthwith, he had an enormous alvine evacuation, with the matter of which, sixteen lumbrici, and an astonishing swarm of ascarides, *all dead*, were commingled. In another, he expelled six of the former, and many of the latter kind. During the day, he passed several loose stools; but these did not dislodge any worms. Qualmishness, at the same time, and exhaustion, with a sense of inanition, remitting headach, and frequent tendency to perspire, annoyed him; while his urinary, intestinal, and cutaneous excretions, emitted a strong terebinthine smell.

Next night he repeated the medicine in an equal dose, and on the following morning took castor-oil. His feelings and condition were, on this occasion, little different from those he experienced on the preceding day. The first evacuation was copious: it contained four large lumbrici, and great numbers of the ascarides; and all of both kinds, as formerly, were quite dead. In the course of the day his bowels were frequently moved, without any worms being expelled. The faecal matter, however, was muculent, slimy, dark-coloured, and gave out the odour of turpentine.

This man took small doses of castor-oil on the four subsequent days; but it was nearly a fortnight before his headach

and gastric disorder altogether ceased. Since that time to the present (February, 1821), he has remained free from every symptom indicative of vermigenous disease.

Case 3d. May, 1816. — W. B., aged eighteen years, has for a long period of his life been afflicted with convulsive paroxysms, bearing great affinity to those of epilepsy. His person is emaciated; his countenance pale, languid, anxious; his eye dull and watery. Depraved appetite and constipated bowels, alternating with diarrhoea, have long distressed him. His breath is foetid, his mouth foul, his belly tense and swollen. During sleep, he grinds his teeth and utters loud moans, is restless and agitated. These and other circumstances seem to authorize the opinion, that his convulsive movements originate from intestinal excitement produced by the presence of worms.

For the purpose of expelling these noxious animals, an ounce of oil of turpentine, suspended in three ounces of sweetened milk, was given to him at bed-time, and early next morning a repetition of the same dose. Awaking from a disturbed slumber, he experienced great oppression in the epigastric region. His mouth was dry, his breath tainted with the medicine, his thirst insatiable. Intense headach made him dull, peevish, and spiritless. Globules of ungenial perspiration glistened in his forehead: his carotid arteries pulsed with extreme, almost audible violence. Diminution of sensibility supervened, and, after some time, gave place to a convulsive paroxysm, in no degree different from those which he had heretofore sustained. This was followed by painful and repeated vomiting, and the matter thus disgorged was deeply impregnated with the flavour of the drug. He had only one stool during the day: it emitted a similar odour. With its contents, two lumbrici and several ascarides were intermingled.

At night, being disgusted with the medicine, he declined taking it; but, in its stead, received a solution of Epsom salts, which, on the succeeding day, produced two alvine evacuations imbued with a faint terebinthine scent. No argument could induce this person to proceed farther with the treatment, and he was, in consequence, left to appreciate the suggestions of his own mind.

After the lapse of two months, application was again made to me in this young man's behalf. His disease seemed not, in the interval, to have undergone any change. The original mode of treatment was again advised; and to this, on reflection, he yielded a reluctant assent. In compliance with this advice, he took an ounce of castor-oil in the afternoon, and a purgative powder, containing calomel and gamboge,

at the time of retiring to bed. Next morning he awoke about the dawn, and, on having a motion of his bowels, took one ounce of oil of turpentine in an aromatic emulsion. At the same time, the operation of his medicine was assisted by the liberal use of warm demulcent drinks.

Much unpleasant feeling, and several discouraging symptoms, but likewise some perceptible advantage, resulted from this exhibition of the remedy. Considerable nausea was excited, and headach, and thirst, and abdominal distention. Tendency to convulsions was not perceived: strangury, however, supervened, and discharges of bloody urine. Nevertheless, these soon subsided under the use of topical fomentations. The bowels acted frequently during the day, and, with a great quantity of slimy fæces, expelled many lumbrici, all dead, and imbued with the terebinthine taint. Two days subsequently, the same remedies were a second time administered, after being preceded by the warm bath. Similar phenomena, with the exception of strangury, were on this occasion elicited. The urine was nearly limpid: it had a pale yellow tinge, and, with the perspirable and fæcal excretions, retained the flavour of the medicine.

With the intervention of a few days between each trial, the same course of treatment was three other times repeated, with effects not particularly different. Numerous dead lumbrici, and many of them of a large size, were by these means dislodged; but no trace of ascarides could at any time be discovered. Up to the last-mentioned date, the young man's convulsions are not known by me to have reappeared.

Case 4th. July 30th, 1817. — M. T., an active girl, seven years of age, was this day visited by me, at her parents' request. By their account, her health had been defective during the last twelve months. Her skin, at present, is hot and dry; her pulse small, rapid (126), irregular. She has constant thirst; impaired appetite; headach; occasional hiccup; hoarse, frequent cough; muscular spasms. Sometimes she vomits her food; her bowels are often constipated, often morbidly free, often griped. A sense of coldness pervades her abdomen, particularly its umbilical region: it is distended and irritable under pressure. Oftentimes she starts in great alarm from an unrefreshing and disturbed sleep, and utters piercing shrieks. While asleep, her under lip is intermittingly agitated by tremulous motions. An evanescent blush plays upon her cheeks; her eye has a characteristic wildness of expression; its sclerotic tissue is pearly white and glossy, its pupil languidly contractible; her whole physiognomy, indeed, is indicative of disease originating from excitement of the alimentary canal.

This girl was put under a course of alterative evacuants, which, in the space of one week, brought away very great quantities of discoloured, scybalous, muculent fæces, with the effect of relaxing the abdominal tension, and mitigating the cephalalgic pain. In other respects, her pathognomonic symptoms underwent little change. The same remedies were continued during another week, with the addition of the warm bath every second evening. Their operation, at the same time, was assisted by frequent frictions of the abdominal and lumbar regions with an ammoniated liniment combining turpentine and camphor. This treatment effected the dislodgement of much sordid fæcal matter, in which were found several detached pieces of tape-worm. Each of these was living, and varied, in length, from one to three inches. Little improvement of the patient's health, however, had as yet become apparent. *Tæniæ* infesting the alimentary system were now regarded as the chief source of all this young person's disorders, and for their expulsion the oil of turpentine was prescribed. For this purpose, she took four drams of the medicine mixed with an ounce of syrup of roses, after her having been immersed for fifteen minutes in a warm bath. The frictions were also continued; and, at the end of six hours, half an ounce of castor-oil was exhibited.

About an hour after taking the medicine, she required to be placed in bed by reason of intense headach, vertigo, and a disposition to vomit. Anon, she unloaded her stomach by vomiting, and soon fell into a profound sleep, during which her body was covered with a profuse perspiration. When she awoke, being more composed, her mother prepared a second mixture, and made her swallow it. Effects not materially different from those induced by the first dose again supervened. The medicine, however, was with much difficulty retained, and free action of the cutaneous exhalants re-established. In the afternoon she received a purgative powder, which soon began to operate. By this means, great quantities of ropy, offensive fæces were expelled; and in one of the dejections was found a piece of *tænia*, measuring four feet in length, and showing no signs of life. Next day the same treatment was repeated, with the most beneficial effects. In the course of three days eighteen pieces of the worm were discharged from her bowels. These pieces varied from one inch to a foot in length; they were all dead, and more or less impregnated with the drug's odour.

Cathartic powders were occasionally administered to this patient during the five subsequent weeks, when their use was discontinued. For some time her alvine discharges contained many minute portions of lifeless tape-worm; but

latterly these altogether disappeared, and the patient for many months remained in a confirmed state of health.

February, 1819.—About the commencement of this month, some fragments of living *tænia* being detected in the dejections of the same girl, she was again placed under my care. Her health at this time was imperceptibly affected: she took food, and amused herself with all the vivacity of a sprightly child. Her complaints consisted solely of occasional gripes and unpleasant tension, without enlargement, of the abdomen. With the object of ascertaining its helminthagogue virtues, in a different mode of exhibition, I now instituted a trial of the oil of turpentine in the form of an injection. Under my own direction, accordingly, a lavement, consisting of an ounce of the drug, and six ounces of tepid milk, was slowly and cautiously introduced. During its reception, she complained of acute pain in the bowels; but this was only momentary, and unaccompanied with any other troublesome sensation. After being retained about twenty minutes, the medicine was expelled, and brought with it a copious dejection, in which eight pieces of tape-worm, all dead, and of different lengths, were discovered. At the end of another twenty minutes, some urine was voided: its colour seemed natural, but it emitted a strong terebinthine smell. In two hours more, she had a second intestinal evacuation, from the contents of which two pieces of *tænia* were taken. Late in the same evening, a clyster, in all respects similar to the former, was carefully injected. This was immediately thrown back, along with a small proportion of fæcal matter. It dislodged one short fragment only of the animal, and no disagreeable feelings were induced by its operation. The joints of the worm manifested no signs of life. The child afterwards took supper as usual, was put to bed, and slept soundly till morning. At an early hour five grains of calomel were given to her, and in the course of the day produced four free stools. With the first of these, two portions of *tænia*, dead, and each measuring five inches, were rejected. At my suggestion, her father, as soon as he rose from bed, ascertained the following circumstances;—her linen, a slip of flannel bound round her neck, her night-cap, and the contiguous bed-clothes, gave out a distinct smell of turpentine; her breath, also, together with her urinary and alvine excretions, was deeply impregnated with the same odour. On the subsequent day two additional pieces of the worm were voided by stool: they were dead, faded, and shrivelled. For several weeks my patient occasionally took aperient medicine; and at the time of my departure from Strathearne, in 1821, experienced no relapse of the disease.

Case 5th. June, 1821.—Mrs. J., the mother of a numerous family, and far advanced in life, had suffered during several years from a variety of complaints, which medicine hitherto had proved unable to remove. Her existing symptoms were, in chief,—unequal arterial action; nocturnal paroxysms of feverishness, accompanied with general disquietude and insomnia; excess of bile in the circulating fluids; cedematous condition of the ancles and feet; obtuse fixed pain in the left hypochondriac region, increased by pressure; a deep-seated, elastic tumour, perpendicularly oblong, and large as a new-born infant's head, situated in the parts corresponding to the sigmoid flexure of the colon; successive developments of the hæmorrhoidal excrescence, giving rise to frequent small discharges of blood; coffee-coloured, sedimentous urine; occasional strangury; fits of the senile cough determining copious expectoration of yellowish frothy mucus; distaste of aliment; interchanges of constipation and liquid dejections; flatulency, with offensive eructations, and the more common symptoms of the dyspeptic and hysterical states.

Various modifications of alterative, deobstruent, and tonic medicines, with tepid and warm-bathing, abdominal and vertebral frictions, were employed during the eight subsequent months, as the means of mitigating or removing this person's complaints. Their best effects, however, produced only temporary and imperfect benefit; and relapses were, at all times, readily determined by causes apparently very little calculated to deteriorate her health.

Reiterated failure of these remedies ultimately gave rise to a suspicion that tænia, acting on the internal alvine surface, might be the source from which all my patient's constitutional derangements arose. With the design of proving this indication, therefore, and, at the same time, of forwarding her cure, it was forthwith resolved to administer oil of turpentine, and to promote its influences by the exhibition of a powerful co-operative evacuant.

Pursuant to this view of her treatment, six drams of the medicine, suspended by agitation in two ounces of an aromatic infusion of rhubarb, were taken by the patient, at noon and in bed; and, after an interval of three hours, the dose was repeated to the same extent. Fomentations of the abdomen were superadded, and, when another hour had elapsed, two drops of croton-oil, in a glass of sherry-wine, administered. In twenty minutes, acute intestinal spasms came on, and gradually increased. The bowels experienced a most distressing sense of distention, and an indescribable feeling was excited in the left lumbar region. By and by, a cold perspiration overspread the face and chest: tremors of

the inferior extremities succeeded: ringing of the ears ensued: the features at last became cadaverous, the eyes agitated by nervous motions; and the sufferer sunk in an alarming swoon.

By the use of analeptics and stimulants, she was soon restored to consciousness, and immediately (about fifty minutes after the croton-oil was taken) the bowels began to act. The matter of three evacuations presented no unnatural appearances: it emitted, however, the true terebinthine scent. That of a fourth, which soon followed, and was attended with exquisite pain, consisted almost entirely of an innumerable swarm of very small worms, lifeless, and floating in a thick muco-gelatinous fluid, tinged with a few streaks of florid blood. This fluid measured altogether more than three English pints.

The patient now replaced herself in bed, after having received a mucilaginous anodyne draught. In the afternoon and course of the night, which passed away in unexpected tranquillity, she expelled, in three additional dejections, a great number of the same kind of worms. They were all dead, suspended in the viscid mucus, and very sensibly impregnated with the odour of turpentine.

Notwithstanding the distress induced by our first attempt, my patient hesitated not to prosecute the same system of treatment. In consequence of this resolution, she took two drams of the oil of turpentine, in different vehicles, with which a proportion of castor-oil was conjoined, on the mornings and evenings of alternate days, till the dose had been six times repeated. By the end of a week, this lady's circumstances were found to be exceedingly ameliorated. In the interval, great numbers of worms were expelled in occasional free evacuations. All her recent, and, at the same time, many of her original, symptoms ultimately subsided, and the swelling in her left side no longer remained. By a varied management of her alimentary functions, this person in the course of a few weeks regained a state of health which withstood the atmospheric vicissitudes of winter; and its tenour has never since been so disturbed as to require the assistance of medicine.

Remarks.—By the evidence of these and similar cases, it is made probable that the essential oil of turpentine possesses virtues capable of fulfilling the chief indications of treatment in disease originating from the presence of worms in the alimentary canal. The principle on which these virtues depend does not seem, however, to be altogether distinguished by the true cathartic character. This medicine, according to my apprehension, contains some inherent quality of resisting

absolute decomposition by the assimilative operations of the organs of nutrition, and passes along the intestines in a great measure unchanged. There the proper terebinthine* principle, whatever that may be, comes in contact with the parasitic animals, and, by the influence of its specific properties, deprives them of life. By this means they are brought into the state of inert matter, and thereby subjected to the expulsive action of the organ, whose cavity is the place of their production, and whose functions their existence disturbs.

Each of the patients whose cases have been detailed, though in different degrees and at different intervals after taking the medicine, experienced various unfavourable symptoms. Excitement or increase of headach, gastric disorder, nervous exaltation, convulsive movements, seem to have been induced by its action on the sentient tissues of the organs of assimilation. Strangury and emission of bloody urine were, on one occasion, an evident result of the drug's exhibition; but their presence was transient, and may, without infringement of philosophical rules, be regarded as a trivial exception to a general law. The cause, whatever it be, of the other unnatural manifestations, does not communicate effects permanently injurious to the system. It is even questionable whether these same manifestations do proceed from an internal use and agency of the medicine itself, or from the nervous exasperation produced by reaction of the disturbed animals when subjected to the influence of its specific powers.

Analogy, though at best but a trustless guide, may without unfairness be allowed to contribute the means of determining what amount of certainty is due to the foregoing surmise. For this purpose, let an ounce of the essential oil of turpentine, suspended in tepid milk, and sweetened with sugar, be given to a healthy adult; and, with careful observation, mark the result. This has been done several times by my particular direction, and the uniform consequence was,—the medicine, after being retained in the stomach, two hours at the longest, was rejected by vomiting. In most of the persons on whom this experiment was made, there could be no doubt of the cause of this rejection being in a chief degree dependent on the power of imagination fostered by the drug's unpleasant taste. Beyond the gastric irritation, no other symptom supervened in any of these instances; but, notwithstanding its presence in the alimentary organs was short, and

* Turpentine offers a subject of curious and useful research to the investigators of vegetable chemistry. — K.

its expulsion appeared in all of the cases to be complete, the turpentine had partially yielded to the effects of absorption, and its odour was perceptibly exhaled by the cutaneous, urinary, and alvine excretions.

When we have resolved on administering oil of turpentine for the dislodgement of parasitic worms, it may be requisite that, at the same time, we combine measures adapted to obviate the injurious effects which the medicine sometimes exerts in the functions of the sanguineous and nervous systems. For this purpose, my own experience enables me to prefer the use of preparatory and consecutive evacuation. In the preceding histories, when the disease was intense and obstinate, these precautionary means are represented as having failed of producing advantage: in ordinary and milder instances, however, their beneficial tendencies will be apparent. Croton-oil, from the promptitude of its operation, may yet be so managed as to become an energetic agent in completing the expulsion of the dead worms, together with the helminthagogue drug, from the system, and thus prevent the distresses imputable, in a great degree, to absorption of the terebinthine principle.

Oil of turpentine, in young and delicate subjects, may be exhibited by injection. In this form, however, it is less efficacious, although less disagreeable. It acts with more energy, in this way, on that kind of worms which infests the excreting portion of the intestinal tube. Introduced, indeed, into the alimentary canal, in whatever way, the medicine seems to determine particular effects by means of its influence on the actions of the muciparous organs: by rousing the energies of these, when overpowered or exhausted, it contributes to restore, to their salutary proportions, the different secretions by which the processes of alvine evacuation are facilitated and renewed. When disease, moreover, depends in a chief degree on embarrassment, disorder, or subversion of the intestinal functions, an appropriate exhibition of this oil will be found materially beneficial in commencing or promoting that kind of reaction in the parts, wherewith Nature invariably strives to overcome the causes from which the disturbance of their health may have originated. For this purpose, as experience appears to show, it imparts by its proper efficacy, whatever that may be, a peculiar excitement to the nervous fibrils, vascular ramifications, mucous follicles, and muscular fibres, throughout the whole extent of the alvine surface; and by the complicated impulse thus induced, becomes a powerful auxiliary in obtaining the recovery of functional balance which was lost.

Instructed by this view of the terebinthine properties, I am at present directing their employment in a most obstinate and

protracted case of that disease, to which, with little apparent propriety, the name of *diarrhœa tubularis* has been applied. Hitherto, many favourable circumstances have combined to encourage the hope of my patient's sufferings being, at last, considerably mitigated. Be the results of the experiment, however, what they may, its detail is intended at some future period to constitute a brief pathological report, having for its object, to assist in discriminating the indications under which the essential oil of turpentine can be advantageously prescribed.

More than one circumstance in the case No. 5 will be admitted to involve considerable interest. The tumour situated in the patient's left side may, without impropriety, be regarded as one of the encysted kind. It had local connexion with the colon; it was ruptured by the medicine's topical effects; its contents were thrown into the channel of the intestines; and there can be little doubt of its having been replete with a particular fluid, containing a multitude of parasitic worms. All these, when expelled from the bowels, were dead; and, with the utmost care, it was found impracticable to obtain even one of them in an entire condition. Subjected to careful observation under a common microscope, several of the most perfectly retained characters which they were observed to possess, induced me to consider them as mutilated fragments of the vesicular worm described by later helminthologists* under the generic designation *ditrachyceros*, with reference to the number and roughness, or *diceræ*, to the pumber only, of its horns.

Notwithstanding my own mind felt satisfied of the identity between these and the rough double-horned worm originally discovered and described by Sultzzer, and subsequently by Lesauvages, yet, from the necessarily imperfect nature of my observations on the disorganized remains of the animals, I do not find myself warranted in advancing this report as other than probable testimony to the facts in natural history which these philosophers had heretofore promulgated. As the sub-

* SULTZER: Dissertation sur un Ver Intestinal, nouvellement découvert et décrit sous le nom de Bicorne Rude, *Strasbourg*, 1801. — ZEDER: Anleitung zur Naturgeschichte der Eingeweidewürmer, *Bernberg*, 1803. — LAENNEC: Mémoire sur les Vers Vésiculaires, *à Paris*, 1804. — RUDOLPHI: Entozoörium, sive Vermium Intestinalium *Historia Naturalis*, 3 vols. 8vo. *Amstelodami*, 1810. — H. CLOQUET: Dictionnaire des Sciences Médicales, Tome XXII. *à Paris*, 1818. — LESAUVAGES: Bulletins de la Société de la Faculté de Médecine, Tome VI. p. 115.

ject, however, embraces matter alike amusing and instructive, the readers of the *REPOSITORY* may take interest in contemplating its chief features in the form of a descriptive sketch.

History.—Dr. Sultzer's patient was a female, aged twenty-three years. From infancy, this person had been subject to frequent swoonings, and, since her seventeenth year, to a diversity of nervous affections. In her twenty-second year these symptoms became very distressing; and, superadded to them, were an habitual languor and inappetency, obtuse colic movements, and a fixed pain in the left hypochondrium, which pressure or motion readily aggravated. Against these morbid indications she took a large dose of the family panacea,* a drastic quack-medicine, with the effect of determining a "*superpurgation*" which continued nine days. This was accompanied with vomitings, violent cramps, and "*colics so frightful*," as to excite suspicions of her being poisoned. Subsequently to this occurrence, the "*coliques sondees*" and pain in her left hypochondrium never altogether subsided.

Some months after this, she had inflammation of the throat; and, as a remedy, swallowed a draught containing manna and sulphate of soda. This purgative, in the course of two days, procured the discharge of a "*prodigious number of bicornes rudes*." Among all these, four only were found entire: the rest wanted their horns or external membranes; these parts, however, were detected separately in the *fæcal* matter. From this time her left hypochondriac region was quite free of pain, except when strongly compressed: by and by, uneasiness there entirely ceased, and the patient perfectly recovered.

Dr. Sultzer regards the whole tract of the intestines as the "*habitat*" of these animals. From analogy of their relations to other "*vesicular worms*," however, Dr. Laennec considers them as having been included in a cyst, which, by its ultimate rupture, threw them into the cavity of the *alvine* tube. This sentiment is founded chiefly on the pain which habitually existed in the left hypochondrium during the existence of the worms, and was probably caused by their presence, they having never reappeared after their expulsion. This "*fixity*" of the pain seems to him to indicate their confinement in a particular spot from which they could not escape; for worms, such as *tæniæ* and lumbricoid *ascarides*, which freely pervade all parts of the intestinal canal, carry signs of their presence into every place they successively occupy.

* La poudre d'Ailhaud.

Description. — *Ditrachyceros* constitutes a genus of vesicular worms: of this, one species only has hitherto been observed by naturalists. It is the *ditrachyceros rudis* of Sultzer, the *cysticercus bicornis* of Zeder, the *diceras rudé* of Rudolphi, and, in his native idiom, the *bicorne rudé* of the Strasburg Physician by whom it was first discovered.

This worm is of a fallow (*couleur fauve*) colour, and, including all parts, about four lines long. Its body is composed — 1st. of an exterior, thin, floating membrane, enveloping it on all sides, without adhering to it, except in the proximity of its horns; 2d. of a stronger, thicker membrane, which is also attached to the roots of its horns; 3d. and of a sort of cyst or bag, smaller than the two former, and included in the cavity of the second. Each of its horns is thick as a horse's hair: both of them are conic, rugous, and somewhat flattened on the sides of their base, where they unite and form a sort of common trunk, which is very short, and moves in all directions as on a pivot. Examined with a microscope, the horns appear formed of a homogeneous substance, pitted with cells which are larger as their site is nearer the base (*pedoncle*). They are crossed longitudinally by a sort of line, consisting of brittle matter. Their surface is bristled with numerous pyramidal flakes.

The cavity of the body contains a limpid fluid, and its investing membrane, seen through a microscope, appears all over, both internally and externally, bestudded with tubercles, varying much in form, being oval, round, triangular, or trapezoidal, indented in their edges, and separated from each other by irregular depressions. The internal cyst is dark brown: both its surfaces are marked with deep wrinkles, but it contains no aperture, and is contracted into a point towards the back, where it is connected by adhesion to the inner face of its envelope.

 PART II.

 ANALYTICAL REVIEW.

A Practical Essay on Diseases and Injuries of the Bladder, being that to which the Royal College of Surgeons adjudged the Jacksonian Prize for the year 1821: Irritable Bladder is treated of in all its varieties, both with and without Mucous Discharges; also Inflammation, Suppuration, and Ulceration of that Organ; with Cancer and Stone, the formation of which last is explained on entirely New Principles: Retention and Incontinence of Urine are considered very fully; and the whole is prefaced by an Inquiry into the mutual Influence that exists between Life and Organization; including some Observations on Ocular Spectra and the Nature of Mind. By ROBERT BINGHAM, Fellow of the Royal College of Surgeons; Author of Practical Essays on Strictures of the Urethra and Diseases of the Testes, &c. &c.; and Lecturer on the Theory and Practice of Surgery. London, 1822. 8vo. Pp. lix.—467.

HE who comes before the public as the author of a prize essay, if he may anticipate an attention more respectful than is accorded to others, must expect also to be visited with a scrutiny more exact. For the very circumstance which thus lifts him from the *οἱ πολλοί* accustoms his readers to require excellence in proportion to the difficulties they fancy him to have surmounted, or the formidable competitors whom they imagine him to have distanced. Upon the whole, it is perhaps a matter of regret when the palates of those whom it is our wish to please are thus rendered fastidious; but this misfortune only aggravates the imprudence we betray when we are ourselves forward to contribute an additional provocative. Our remarks apply to the work upon the table. For Mr. Bingham could not be ignorant that his brethren are used to be somewhat on tiptoe for the prize work from the college; and we consider, therefore, that it would have shown more tact in him had he omitted still farther to stimulate expectation by the "*ora magna sonantia*" of the title-page and prefatory address, which remind us of the "*jamque opus exegi*" of a writer of more ancient date; except, indeed, that

our author hugs himself at the beginning of his performance, while the self-gratulations of the Poet of Pontus were appended to the conclusion of his task. We have two opinions on which we confess obstinacy. First, we feel quite certain that two and two make four; and, secondly, we believe, with the poet, that want of modesty is want of sense. And though this latter rule, like all others, may now and then be substantiated by the occurrence of an exception, we do not think ourselves warranted in considering Mr. Bingham to have furnished an instance of any such distinguished anomaly. Yet, while it is true that we rest from our labours somewhat disappointed of the harvest of corn and oil and milk and honey which we had anticipated from this "land of promise," we have pleasure in assuring our readers that it contains much to which we may fairly append the scarlet thread of immunity and approbation.

The work is prefaced by an inquiry into the mutual influence of life and organization; words on which, if we may judge of our readers' feelings by our own, the public has already feasted to satiety; for we would just now as soon hear a "bag-pipe sing i' the nose" as any recurrence of the exhausted arguments upon these disputed topics. Mr. Bingham speaks of a "nervous fluid or life," and we have heard a gentleman deservedly high in the Profession call life a "subtle moving fluid." Now, whether these ethereal substances are intended to be synonymous, or in what, if different, consists their difference, we do not know, and believe our readers will as little care. We will leave them, therefore, for wiser heads than ours to comment upon and explain, as it is our intention to concern ourselves chiefly with the practical and more pleasing portion of the work. And when we give the following account of a very *luminous* experiment practised by our author upon himself, we shall hardly be considered fastidious if we pass on to something less entertaining, probably, but surely, surely, not less instructive.

"I therefore lay back on a sofa, closed my eyes, and pressed firmly upon the centre of each with the point of my finger during a period of about ten minutes, in which time I was agreeably surprised by seeing the following beautiful spectra. At first there was nothing but darkness perceptible; this, however, gradually gave way to a fiery red colour equal in extent to the previous darkness. The red colour, however, was not all of one shade, but seemed to be a light red ground marked all over with red spots of a deeper hue, which varied their shape, being sometimes square, and sometimes round, and some of these red spots were of a deeper colour than others. All the red spots were arranged in exact order at equal distances; and the deepest coloured red spots were in square patches, and these square

patches seemed to meet each other at the corners, and were equal in number with the intervening lighter red squares. Every part of this spectrum was affected with a constant, but otherwise indescribable motion; indeed, the nature of the motion seemed to be perpetually varying. Sometimes it might be compared to the motion on the surface of a fluid slightly effervescing; at other times there appeared to be different kinds of motion in different parts of the spectrum, and these different parts appeared to ebb and flow to and from each other. Sometimes there was a waving motion extending in circles from the centre out towards the circumference, exactly similar to those seen on the surface of water after throwing in a stone. After a time a round yellow spot, about half an inch in diameter, appeared in the centre of this red spectrum, and the yellow part gradually became of a deeper and deeper colour, and great variety of rapid motion was observable in all parts of it. Sometimes extremely brilliant streaks of white light were seen somewhat radiating from the centre of the yellow part, and these white streaks kept vanishing and reappearing every instant," &c. &c. &c.

The description of these changes, and other such, except that blue and red and curvings and crossings usurp the place of yellow and red and squares and patches, occupies about seven pages, but we have not patience to make farther extracts. Had it been the unwieldy tumblings of a leviathan, or the tardy motions of a displaced mountain, which are thus accurately related, we might not have been surprised; but we are lost in astonishment at the extraordinarily retentive powers of that memory which could retain so minutely and describe so unhesitatingly such a hurlyburly of appearances so fleeting. But we all recollect in how short a time the seven heavens were traversed, yet how faithful the description of the journey! Therefore why should we wonder?

Irritability of the bladder may depend upon several causes. To illustrate that species of it which is considered to arise purely from disorder of the digestive organs, three cases are given. The first, one of a child who "wanted to piddle," and was cured by daily morning doses of the hydrarg. c. creta, and a third, in which the disease had existed through many years, yet was speedily cured under a rational plan of treatment. These circumstances render it both interesting and useful, and as such we give it in the author's words.

"A gentleman of spare habit of body, and thirty-six years of age, residing in the West Indies, and being distressed with great irritation in his urinary organs, for which he could procure no relief, came to England for medical advice. He informed me that he had been ill thirteen years; that he was more or less constantly wanting to make water, and even when he had emptied his bladder he did not feel quite easy. The quantity of his urine varied a great deal, and sometimes he voided so much as made him think he had diabetes: he had

pains about his hips and down his thighs, and sometimes in the loins, and occasionally in the glans penis. He was oppressed with low spirits, and almost despaired of ever having better health. The irritation of the bladder commonly disturbed his sleep in the night. He could assign no cause for his indisposition. I therefore began to suspect disorder of the digestive organs, occasioned by some error in diet, and made particular inquiry into those circumstances. I found that he lived like numbers of other fashionable people—he sat up late at nights—breakfasted at eleven o'clock—lunched at two—dined at five or six in the evening, and took tea or coffee afterwards. He drank about a pint of wine every day after dinner, and sometimes a larger quantity. He always found himself more uncomfortable after his wine for the remainder of the day, but if he omitted it he never failed to be worse on the day following, and the same thing happened if he took more than his usual quantity. He had furred tongue, and was frequently subject to cough and shortness of breathing, so that he was fearful of consumption. I recommended him to rise early in the morning, never later than seven o'clock; to breakfast between eight and nine; to eat no lunch; to dine at three; never to eat after eight in the evening; always to go to bed at eleven; and totally to abstain from all kinds of fermented liquors, and take the following medicines:—*Pil. hydrarg. omni nocte; et haust. c. infus. gentian. comp., tr. arom. et magnesia alb. bis die, c. c. primo mane et horâ ante prandium.* Having pursued this plan four days, he called to tell me he had not been so well for thirteen years, and that he thought himself perfectly cured. He came to see me several times afterwards, but I did not think it necessary to advise any thing else, for he continued perfectly free from irritation in the urinary organs, and was in excellent spirits. He remained in this country eighteen months to see if his complaints were likely to return, and during that time had one relapse. I then discovered his stomach was very much out of tone, and merely told him to drink about half a pint of sherry every day after dinner, which greatly surprised him, because I had formerly forbidden him to take any wine. He tried the wine, and in a few days was perfectly well again. I then explained to him that if he only took wine now and then, when his digestion failed, and left it off again when his digestive powers returned, that he might by that means alone preserve himself in health."

Now, no one can pay more sincerely than ourselves his tribute of admiration to the simplicity and rationality of that practice which looks to disorder of the digestive organs as one great source of the maladies to which the human frame is liable; and we have just cited a striking instance of its success. But we will not lose the present opportunity of cautioning our readers, and in particular the younger portion of them, how they allow such views of disease to induce, in their minds, a habit of indiscriminate generalization. We warn them that their unreserved application lessens, or tends to lessen, our estimation of the scope and range of medicine

as a science, and that they not unfrequently produce a superficial manner of examining and managing disease, such as cannot but lead to very dangerous errors in practice. Indeed, we consider that we have ourselves seen more than one instance of complaints going on to a fatal termination when conducted or at first treated under the influence of these impressions, which would probably have experienced a different and happier result had they been subjected to more active and dissimilar superintendence.

Irritable bladder may depend also upon ulceration in the bowels. In one obstinate case of urinary irritation, the symptoms of which were not relieved in proportion as the digestion became natural, patches of pus were observed upon the fæces when costive, which were supposed to have been produced by the latter having lain in contact with small ulcers of the lower intestines. The patient recovered under persevering attention to the digestive functions, and the daily use of a hip bath. Mr. Bingham considers the complaint as one of frequent occurrence, and claims the merit of being the first to observe the connexion between the symptoms and their imputed cause.

Disease of the kidneys is a frequent cause of *irritable bladder*. The symptoms and appropriate treatment will be best shown by the following case: —

“ The patient has had great frequency of making water for several years. The desire is incessant, and the pain is not even relieved by the evacuation of the urine. Now and then there is a discharge of mucus, in which specks of blood are occasionally seen. Red sand comes away with the water. There is pain and tenderness of the back; frequent sickness and vomiting; pain near the umbilicus, and occasional pain in the bowels; pain near the costa ilii and down the insides of the thighs, and burning pain in both groins. Mild diuretics afford the most relief, and of these small doses of the cubebs and bals. copaibæ agree best. The patient's sufferings are also very much influenced by the state of the digestive organs. Saline effervescing draughts, small doses of magnes. vitriol., pilul. hydrarg., manna, and all the alkalies, occasionally afford relief; and sometimes it is useful to add light tonics: but it is necessary to change the medicine frequently. The bowels are often evacuated by injections of warm water, and the severe pains are mitigated by tinct. opii c. solut. amyli. All kinds of mucilaginous drinks are occasionally taken, and great comfort is derived by employing the hip bath, or by immersing the whole body in the warm slipper bath.”

Mr. Bingham says, that there is such reciprocal connexion between the urinary and digestive organs, that the medicines which act on either system have an influence also on the other. The observation deserves to be remembered. We

have ourselves the pleasure of being acquainted with a Physician of very considerable experience, who is accustomed to prescribe the tinct. lyttæ in cases where the power of the stomach is impaired, and his continuing the practice is a sufficient assurance to us that he has found it successful. Although irritability of the bladder is a frequent attendant upon renal affections, sometimes very considerable disease will exist in the kidneys without such consequences being produced. In the works of RIVERRIUS, a case is recited where many calculi, as large as almonds or beans ("amygdalæ-fabæ-magnitudinem æquantes"), were discharged through an abscess "in regione renis," while "æger in eo statu satis commodè vivit, et omnes actiones ordinarias liberè exercet." With respect to the probability of calculi in the ureter being an occasional cause of irritable bladder, we may refer to a case given in the works of BONETUS, Vol. I. p. 658. It is the account of a child who, during its short life, appeared to suffer much from the symptoms of irritable bladder; and on dissection, one of the most prominent appearances was a calculus, "membranis tenaciter involutus," impacted in the very beginning of the left ureter; although it is true that the kidney of the same side was not altogether free from disease.

Irritable bladder frequently accompanies diseases of the urethra, and in several urgent cases of this nature, attendant upon gonorrhœa, the symptoms were invariably relieved by light tonic medicines, such as *mistura camphoræ* with *inf. gent. comp.* Stricture of the urethra is commonly accompanied by irritable bladder, the cure of which is of course to be attempted by those means calculated to remove the stricture.

When disease of the prostate is coexistent with *irritable bladder*, there is not unfrequently considerable difficulty in ascertaining which of the two is the primary affection. In cases of uncertainty, we are directed to decide "by attending to the history of the case. If the symptoms of disease in the prostate gland have existed some time before the frequency of making water came on; or if the symptoms of irritation in both organs are evidently increased by such cases as are known only to operate upon the prostate, as, for instance, riding on horseback, then it seems reasonable to conclude that the disease in the prostate is the cause of the vesical irritation, though even here we cannot always be certain." The symptoms which denote irritation in the prostate are a "sense of heat and fulness, or dull aching pain in the perineum, with occasional aching pain in front of the pubes, as though this latter part were pressed externally by some hard substance. In some instances, the finger in the rectum

will discover the prostate to be enlarged, and if the glans pressed, it sometimes occasions pain in front of the pubis. A medical student was troubled with great irritability of bladder, the symptoms of which were of about ten months standing. He had first sense of heat in the perinæum, and frequency of making water, after exercise on horseback. There came obstinate erections, emissions during sleep, and actual pain and feeling of great fulness in the perinæum, so that he could not bear to sit with his thighs closed. He had to void his urine every ten or twenty minutes, and the quantity of it was considerably greater than that of the fluids taken in. It flowed sometimes in a twisted stream, sometimes forked, and at other times much as in health, generally stopping suddenly with a pungent pain following the course of the urethra, and terminating in the glans penis. He had a furred tongue, and his bowels were irregular, and he had taken great variety of medicines without experiencing permanent relief. But it was discovered that he both ate and drank too frequently and too much. He was therefore limited to eat only three times a day, and to drink as little as possible. In short, with the exception of desiring him to bathe in the perinæum, the whole attention was directed to the digestive functions, and exactly as these were improved, so did the irritation of the urinary organs diminish, and in seven or eight weeks he was quite well.

Irritability of the bladder may be attended by an unnatural discharge of mucus, denoting increased vascular action. This mucus, we are told, is met with of four different kinds. It may be exactly so for any thing we know to the contrary. For our own parts, we neither pretend to such nice discrimination, nor are inclined to impose such limits: and, indeed, unless the peculiar appearance denote the state of parts from which each variety proceeds, the distinction is little worth. All the causes which have been mentioned may, if long continued, occasion a discharge of mucus; but it is the author's opinion that it generally proceeds from the constant presence of a portion of the urine, owing to the inability of the bladder completely to expel its contents. The treatment must consist of those remedies which are calculated to allay nervous irritation, such as opium by the mouth or per anum; the bath and the catheter, which last must be employed more or less frequently as the circumstances of the case may require. In addition to this, strict attention must be paid to the digestive organs. Mr. Bingham is of opinion that the uvula does not exert any particular influence on the urinary organs, and our own experience would warrant a similar conclusion as far as the bladder is concerned. In diseases of the kidney

especially those in which no acute inflammation is present, our experience of its effects is very different. He considers it useful as a light tonic astringent remedy, similar in its effects to the calumba or gentian, only that it is not so intensely bitter as either.

"Injuries and diseases of the spine," he says, "only operate by preventing the complete expulsion of the urine; so that it is the irritation of the retained urine which, in fact, produces irritability of the bladder and the mucous discharge. Besides," he adds, "injuries of the spine cause disorder of the bowels, and that very probably may prove an additional source of vesical irritation." And it is again observed at page 76, that "vertebral affections may produce irritability of the bladder, and discharge of mucus from it, by acting through the medium of the bowels." In other words, vertebral affections have *only one* mode of operating, and that directly upon the bladder; but *the other* is by way of the intestines. In a native of the sister country, this would have needed no extenuation.

We have now done with the words irritation and irritability; words frequently of no very definite meaning, but both convenient, and covering our ignorance of the nature of a multitude of disorders. To press for a definition of them would perhaps provoke some such unsatisfactory answer as that of St. Augustin respecting life: "Si nemo à me quærat, scio; si quærenti explicare velim, nescio." Our author uses them indiscriminately, although they are by no means synonymous.

The symptoms of *inflammation* of the *bladder* are "tumour and burning pain in the hypogastric region; tenderness both above the pubes and in the perinæum; incessant desire to make water, with violent straining; vomiting, tenesmus, and frequent pulse; great restlessness, wild expression of the eyes, occasional delirium, and sometimes retention of urine." Mr. Bingham considers the wild expression of the eyes as denoting great danger. The treatment must, of course, be varied according to the nature or degree of the disease. If the symptoms be acute, then the practice must be of that nature which is suited to other acute inflammations; bleeding, free evacuations per anum, fomentations over the pubes and to the perinæum, and the warm bath. Emollient enemata may also be of service. We agree with Mr. Bingham in his opinion that blood drawn immediately from the part is of more service in proportion to the quantity taken away than when it is abstracted from the system, as we have seen very strikingly exemplified in pleuritis, as well as in this disorder; but we consider, nevertheless, that in acute inflammation of the bladder, bleeding from the arm freely and repeatedly

according to the circumstances of the case, is of the first practical importance. The purgatives used should not be of an irritating kind; and when there is retention of urine, this fluid should be evacuated as speedily as possible, taking care that the point of the catheter be not introduced so far into the bladder as to come in contact with its parietes, which, under these circumstances, are extremely sensitive. When the bowels have been freely opened, and the urine drawn off, the patient is to keep quiet in bed, to use the hip bath night and morning, and "to take saline draughts in a state of effervescence." These may do as well as any thing else, for we suppose patients to satisfy themselves must take something, and lemonade or barley water would hardly content them. To avoid the excitement arising from the presence of urine in contact with an inflamed surface, the catheter, where retention is present, should be used frequently, perhaps every sixth hour. Should symptoms of acute inflammation supervene in old persons of bad constitution, we must be very cautious in applying the lancet. Indeed, from old people of any constitution, it behoves us to hesitate ere we abstract blood.

Mr. Bingham next speaks of *retention of urine*; and the remarks under this head are perhaps the most practical portion of the book. We do not know that they are many of them new, but they are useful. To be sure, he furnishes an exception to this observation, when he says that retention of urine "is often an effect of disease, often a cause of disease, but does not in itself constitute a disease, although some authors have considered it one of great urgency and danger." For our own part, we have been accustomed to think with the "some authors,"—such, for instance, as DESAULT and HEY; and the quibble of calling it "no disease at all" is by no means intelligible to us. It is most alarming when it comes on suddenly, for under these circumstances, unless the patient be speedily relieved, it will terminate fatally in a very short time, although there may not be more than a pint of water in the bladder; indeed, Desault informs us that he has seen complete retention when the bladder has not contained more than a few spoonfuls of urine. But when the disease is more gradual and incomplete, then the bladder will dilate in order to accommodate itself to the contained fluid, and may continue to increase in capacity even for years. The remarks on vicarious determination to the head and lungs, in diseases of the urinary organs, together with the case in illustration of them, are highly interesting, but for these our space will not allow us to do more than refer to the work itself. The symptoms of the disease are, of course, so familiar to our

readers, that we need not detain ourselves by an enumeration of them. We may remark, however, that they are most of them uncertain, except when accompanied by the less equivocal one of tumid bladder, felt either above the pubes or from the rectum; and we may be excused also if we reiterate the important fact, that occasionally, when the bladder has been distended to the utmost, the urine, while there is yet positive retention, will run off by the urethra, as fast as it is brought into the bladder by the ureters; thus occasioning, unless this be known and remembered, very serious error as to the nature of the disease. Retention of urine may proceed either from diminished power or increased obstruction, which last may arise from many sources, such as stricture of the urethra, diseased prostate, abscesses in the perinæum, &c. &c.; and the treatment must of course be modified by the nature of the exciting cause: where, however, there is inflammation or spasm, it must consist chiefly of warm bathing, mild but active cathartics, and perhaps bleeding. "Having already," says Mr. Bingham; "given a caution against the use of the lancet, and having just now said it may sometimes be proper, I think it right to state here, that there are some cases in which the loss of blood is more to be depended upon than any other remedy, and in such it must often be very freely employed." We are glad to see this. But he adds, "to show still farther that I have no wish to abridge judicious venesection, I may refer to the last case, where it will be seen, that I took away forty ounces of blood in the first instance." Now the evidence afforded by the case alluded to is, that at the time of thus using the lancet, Mr. Bingham did not consider the urinary organs concerned in the complaint; indeed, he speaks of having been "led from the disease:" and it is, therefore, no trivial oversight to quote, as a proof that he approves venesection in retention of urine, his practice in a case where it does not appear, that at the time of bleeding, he considered retention of urine to be present. He thinks the application of cold water may occasionally be of benefit, even when the symptoms are of the acute kind; but we have no faith in the remedy, except in those cases of old age where the bladder has lost its tone. Under these circumstances, it is well calculated to be of use.

A bougie was passed, at the earnest wish of the patient, into the bladder of a gentleman twenty-five years of age. The spasm of the urethra, in attempting to withdraw it, was so violent as to flatten all that portion of the instrument which had passed the bulb. This was in the evening. He

was directed to bathe the perinæum with warm water when going to bed; but he was distressed all night with retention of urine, and in the morning his countenance was flushed, his eyes looked red, the pulse was full and strong, and the desire to pass his urine was most urgent. "Twelve ounces of blood were taken from the arm; eight leeches were applied to the perinæum, and he took an ounce of castor oil. A quart of warm water was injected; and when this came away, an anodyne enema, containing tinct. opii, was administered. He went also into the warm bath, as soon as it could be got ready." Shortly after coming out of the bath he made water, but he still had strangury, from which, however, he recovered, in two days, under the use of diluents, salines, fomentations, and the warm bath about once in twelve hours. This case, observes Mr. Bingham, appears to show the impropriety of using the catheter indiscriminately in all cases of retention of urine, a practice which Mr. Pott also condemns in the strongest manner.

In the "*tinctura ferri muriati*," (*muriatis*) Mr. Bingham has no confidence, but appears to depend much more on tobacco administered per anum. In proof of its powers he refers to three cases, given by Mr. Earle in the sixth volume of the Medico-Chirurgical Transactions; from which he cites the history of a young man, who, having for years been subject to stricture, was one morning unable to discharge his urine. A false opening through the urethra was made by an Apothecary, who attempted to pass a catheter; to that, subsequent attempts with a bougie by Mr. Earle, gave great pain, and the instrument deviated into the new passage. Eighteen doses of the tinct. ferri muriatis were taken, and he used the warm bath, but both without effect. An infusion of the nicotiana, in the proportion of one drachm to about eight ounces of water, was then injected; shortly after which the patient became very faint, and perspired copiously, and during this time the urine flowed from him in a stream. In those cases of retention which occur in healthy parts, in consequence of the individual having been obliged to retain his urine against his inclination, the catheter should be used without delay. Indeed, when the disease is produced by mere spasm, it will occasionally be relieved by the passing of a bougie only a little way along the urethra, without its entering the bladder at all. A gentleman had retention of urine, from strictures in the urethra. He had one stricture at six inches, and another at seven. A fine bougie was passed into them, but it became twisted, and would not enter the bladder. After about three minutes it was withdrawn, and

about a quart of urine followed, in a very thin stream. The bougie was afterwards introduced several times, with the same good effect.

We have next directions respecting the use and introduction of the catheter. The mode of introducing that instrument, with its convexity towards the abdomen, the *tour de maître*, as it is called, we could never understand; for it is directed, that in performing the curve, the point of the instrument be kept stationary; and if you give it no new direction by the *manœuvre*, where is the use of making the sweep at all? The French have been accustomed to recommend considerable force in the use of this instrument, and even Desault says, that in those cases where there are obstacles to overcome, catheters of gold would be better than those of silver, in so far as from the greater density of the former metal, they would possess additional strength in proportion to the thickness of their walls; but such practice cannot be too strongly reprobated. We recollect hearing an eminent professor of midwifery, when speaking of the introduction of the forceps, apply the words *arte non vi*, and the rule would correspond equally well with the operation under notice.

Retention of urine is frequently occasioned by disease of the prostate gland. If a catheter pass with facility as far as seven and a half, eight, eight and a half, or nine inches, and then meet with some obstinate impediment to its farther progress, we may suspect enlargement of the prostate; and in old people, disease of this gland may always be suspected as the cause of retention of urine. The enlargement is usually situated in the middle lobe, and consequently the change which is most frequently produced in the urethra, by disease of this gland, is a considerable increase of its natural curvature; but "if the catheter will pass freely seven inches and a half, yet no farther, or if, when it has passed farther, it be found difficult to withdraw it; or if it be a bougie that has been used, and its point appear flattened at the sides; and if, in addition to this, there be heat, fulness, sense of weight, and aching pain in the perinæum," we may then conclude, that the obstruction is caused by an increase of the lateral lobes, and may premise the use of the catheter by "leeches to the perinæum, bathing the parts about the pelvis in warm water, venesection, cathartics, anodynes," and such other means as may be necessary to abate the inflammation of the lateral lobes, and so facilitate the passage of the catheter. But if none of these circumstances be present, we may then conclude that the difficulty is occasioned by the valve-like

projection of the middle lobe, and have recourse to the catheter without delay. Sometimes this instrument may in these cases be introduced, by merely depressing more than usual the handle of the common silver catheter, but commonly there is more difficulty; and a flexible catheter on a stilet, so that the curve may be increased ad libitum, and when in the urethra, as first practised by Mr. Hey, will be at such times a far superior instrument.

For the remarks on the use of self-bending catheters, and on the use of bougies, in the retention caused by diseased prostate, we beg to refer to the work itself; for really the many *headings* in the volume are so formal, and so unnecessary, as to weary us. We know, that in matters of law it is no uncommon thing to divide a case into many different "counts," so as to confer an imposing appearance; it seems, however, that the practice is not monopolized by "our cousins of the quill." But "there is a form in these things, Madam, there is a form;" and to this intelligent observation of the amiable Miss Skeggs, we feel strangely inclined to append the laconic commentary of the observant Burchell.

With respect to the position of the patient during the passing of the catheter, it will be enough if we say that the most convenient is that when he stands upright before the operator; but this may be varied to suit the Surgeon, or according to the circumstances of the case.

When the retention has once been relieved by the catheter, it becomes a question whether it is better to leave the instrument in the bladder, or only introduce it occasionally. Instances now and then occur, where the urine, after it has once been drawn off, is secreted again so very rapidly, as to distend the bladder before the Surgeon can again be upon the spot. In such cases, and in those others where there may have been extreme difficulty in introducing the instrument, it would be judicious to adopt the former plan; but, where neither of these occurrences is present, it is our opinion, as we believe it to be that of the profession at large, although it is not Mr. Bingham's, that the occasional use of the catheter from the very first, is the more rational practice.

When the urine can no otherwise be got away, it becomes necessary to *puncture* the bladder, but perhaps there may exist hesitation with regard to the period when this necessity arises, and the quarter from whence the operation is to be performed. Our opinion on the first point must be influenced by the situation of the patient; for it is not the length of time which the disease may have

existed, but the symptoms it may have occasioned, which are to decide our practice. If the patient be comatose, or have hiccough, the operation must be performed without delay, and, in doubtful cases, the safest plan is to operate early. Where there is neither disease of the intestine, nor enlargement of the prostate, we prefer the operation from the rectum; but if either of these be present, it may be performed between the pyramidales muscles, above the pubes. M. Ducamp, the author of a work on Strictures and Retention of Urine, lately published in Paris, recommends, in imitation of Sabatier and Desault, that the trocar be introduced without any previous incision of the integuments. The operation from the perinæum is only admissible under very peculiar circumstances, and these it is unnecessary here to dwell upon.

Suppuration of the bladder may be known by pain and irritation of that viscus, frequent desire to make water, with pain and generally difficulty in voiding it, and by the presence of pus in the urine. In deciding whether the pus come from the kidney, bladder, or prostate gland, we must form our opinion from an attentive consideration of the symptoms and history of the case. The treatment must consist principally in providing that the bladder completely empties itself, and in taking care of the general health. These are also the chief objects to be attended to in *ulceration* of the bladder, which, in addition to the symptoms that mark the former affection, is indicated also by pus of a dirty red appearance. In this complaint, Mr. Bingham thinks opium suppositories, and the slow injection of warm oil, after using the catheter, are likely to be of service. The use of the catheter every four hours, in the case of an old man, who had suffered for four years with pain during micturition, and other symptoms, "rid him of griping pains in the hypogastrium, and kept him as easy as an old glove."

Scirrhus of the bladder is a hopeless affection, and the utmost we can hope to do, is to mitigate the suffering that necessarily arises from it. From what has been already said, it has become unnecessary to repeat how this must be effected; but we may notice that Mr. Bingham quotes one case of great misery, in which the potassæ nitras, balsam. copaibæ, and terebinth. vulgaris, afforded more relief than any other medicines.

In that *incontinence of urine* which arises from want of power in the sphincter vesicæ, and muscles of the urethra, cantharides are the best remedy. It is of little importance whether they be taken internally, or applied as a blister on the surface. If the latter plan be adopted, it will be best to

apply the vesicatory to the sacrum, and either not remove it until some degree of strangury be present, or to produce this effect by sprinkling the blistered surface twice a day with pulv. lyttæ as long as may be necessary. Mr. Bingham quotes from the sixth volume of the Medico-Chirurgical Transactions a case by "a Mr. Hyslop." Perhaps Mr. Hyslop may choose to say that his case has been referred to by a Mr. Bingham. A case by Mr. Barns, of Exeter, is also cited from the same volume. It is a highly interesting one, and relates to the cure of an unnatural communication between the neck of the bladder and the vagina; but for the particulars of the practice we must refer our readers to the case itself.

With respect to the formation of vesical calculi, and, indeed, with regard to their solution also, Mr. Bingham holds some peculiar opinions. He considers them to be principally formed from the proper secretions of the organ itself, and he believes that alkalies are occasionally capable of effecting their dissipation. We may say of his ideas on both points, that if they be not endowed with *le vrai*, they are, at least, distinguished by *le vrai semblance*.

We may now bring our remarks to a conclusion. The author appears to have taken considerable interest in his work; and there are Practitioners whom his book will make conversant with a class of diseases with which they were not previously familiar, inasmuch as it will lay before them in one volume what was previously scattered through the pages of several.

" Mos fuit antiquus niveis atrisque lapillis
His damnare reos, illis absolvere culpâ."

If such were, at the present day, the manner of pronouncing judgment, our opinion of the work before us would be expressed by neither extreme, and we believe we need not say more. But it contains much which will amply repay the trouble of perusal.

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

La Médecine Légale, relative à l'Art des Accouchemens, &c. &c.
Law Medicine, as it relates to Midwifery. By J. CAPURON,
M.D., Professor of Midwifery, &c. &c. Paris, 1821. 8vo.
pp. 621.

(Continued from page 79.)

IN considering the murder of infants after birth, M. Capuron follows professedly the same order, first discussing the natural causes, and then the practices resorted to in cases of criminal interference.

A child may perish *naturally* in the following different ways:—

1. When it is abortive; when very feeble and delicate, after a disease in pregnancy either of the mother or of itself; when it is “acephalous, hydrocephalous, monstrous,” &c. &c.

2. After a dangerous and protracted delivery. Upon this there is nothing to be said, except that the death of the child under the circumstances in question may not actually take place until it is separated from the parts of the mother, as well as during its retention there. The discriminating marks have been already alluded to.

3. Where delivery is sudden; and the whole contents of the uterus are thrown out together “en bloc,” as it is here described. How death may be caused in such a case, needs no exposition. “But,” says our author, “it must be supposed that the woman has been delivered in solitude.” It belongs to justice to decide whether solitary delivery is criminal or not—we have merely to consider that it is possible for such an occurrence to take place.

4. “When the child, as soon as born, falls head-foremost, on a very hard surface.” This may occur, and has occurred, in such circumstances as those just alluded to—that is, a child has been born in this way, when the mother was in the erect posture; and experiments on dead bodies have been instituted to ascertain the nature and degree of the injury sustained. In most of the cases, not only fracture of the

bones, but rupture of the membranes, and even of the cerebral vessels, was found to have taken place. It is of consequence, however, to recollect, that in a living infant falling from a height of two or three feet, merely by its own weight, the injury will naturally be more signal than in a dead body; and, as (in the case in question) the action of the uterus must be violent, the power that expels the child, and dashes its head with greater force than its own mere weight could do, may effect mischief when the resisting surface is not so hard as a stone pavement.

5. When the mother, during labour, is seized with syncope, apoplexy, convulsions, or weakness in consequence of hæmorrhage, and cannot therefore give the necessary assistance to her new-born infant. This also implies solitude; and the child may perish by suffocation or other causes.

The criminal means of perpetrating this species of murder have been generally resolved into two kinds, viz. by omitting the necessary services required in behalf of the infant, and by inflicting violence. This division is observed by M. Capuron.

The modifications of infanticide by omission are four:—

1. Exposure — either to cold in a state of nudity, or to much heat. In either case, the detection of the murder depends greatly upon the establishment of the fact that the child has respired — of which we shall speak presently.
2. Withholding proper nourishment. The fact of the infant having respired — the vacuity of the stomach and intestines — general marks of inanition, and no signs of violence about the body, are to be taken into particular consideration here.
3. When the child is voluntarily allowed to remain under the clothes of the mother, exposed to all the accidents that may arise from the maternal evacuations.
4. Omitting the ligature of the umbilical cord. Authors have been at variance as to the importance of this operation. While some argue that it is indispensably necessary, others maintain that it may in all cases be omitted without danger; while a few have been even unfavourable to its performance; and others consider that it may be neglected without bad effects in some cases, and that the omission is not necessarily the cause of death. M. Capuron gives the arguments pro and con. The premature ligature of the cord, while the blood still circulates through it, and before there is evidence of its assumption of the new and independent course it should follow, through the lungs of the child, is certainly hazardous; but what Practitioner would sanction the practice of omitting the ligature altogether? We maintain its necessity to be fully established, because instances enough could be brought forward where children have bled to death through that channel. The question,

however, as to the state of the umbilical cord in a case of alleged infanticide, is one not only of importance, but difficulty. Let our author speak his own sentiments on the subject —

“The mere omission of the ligature of the umbilical cord, independently of every other cause, appears inadequate ever to occasion the death of the new-born infant. One of two things must happen, there is respiration after birth either free, or under constraint, or it is altogether suspended. In the first case, the circulation no longer going on in the child as it did when it was yet in the uterus, all the blood which before birth returned to the placenta, passes through the lungs, and does not escape by the umbilical arteries. In the second instance, when respiration is suspended, it is the same as if the child were dead — it is apparently so — circulation is arrested, and hæmorrhage not to be apprehended. In this instance, omission of the ligature may be less dangerous than its application.”

To this he adds, that he has, in vigorous children, cut the cord, and deferred making the ligature until complete delivery; and in these cases the blood ceased to flow spontaneously, without fatal hæmorrhage. The same thing he has observed in infants born in an apoplectic state, or apparently dead. And he is of opinion, that instead of ascribing the death of infants to this omission, it ought to be placed to the account of some other cause.

“Consequently,” says he, “if we meet with the body of a new-born child, pale, bloodless, the colour of wax, and without a ligature on the cord, we should regard the hæmorrhage which occasioned its death after coming into the world as the effect, not of omitting this ligature, but of the obstacles that hindered or suppressed the respiration and pulmonary circulation.”

We do not think that M. Capuron decides this question satisfactorily. It is, indeed, so intimately connected with the great problem as to the existence of respiration, that we cannot assign to it its full import till that be discussed; and then, it will amount to one of several concomitant circumstances that must be taken into the general amount of proofs. Without the *docimasia pulmonaris*, few physiological considerations can have much weight; and to dwell upon the question of the umbilical ligature till that is explained, would be laying the foundation of repetition, if not of confusion. We shall merely add, the presence of a ligature may be no proof against a child having perished by umbilical hæmorrhage. It may be placed after the mischief is done.

Our attention is now claimed by the violent or criminal causes of infanticide. These are—1. Wounds in general, whether extensive or small, as when made by a sharp-pointed instrument, in the way already alluded to. 2. Separation of

the head from the body, or of the body into two portions, by means of cutting instruments. 3. Fracture, or dislocation, as of the cervical vertebræ. 4. "Torrefaction," or burning the infant; and, 5. by *asphyxia*, by which we are to understand suffocation. This last we consider as the great cause of death in such cases; and it may be applied in a variety of criminal ways. Our author here enumerates burying the child alive—shutting it up in a box deprived of air—smothering it between mattresses—choking, by filling the mouth with cloths, mud, &c.—plunging the whole body or the head merely in water—strongly compressing the thorax—strangling by the hands or a cord—exposure to deleterious gases (or vapours of burning sulphur)—casting it into a privy. To these other modifications might be added; but enough is said to illustrate the principle to which they are all alike referrible.

M. Capuron proceeds to remind the Practitioner of the various circumstances that should be taken into consideration upon investigating this description of cases—such as the history of the mother, the nature and circumstances of the labour, &c., all which have already been noticed when considering the death of the child before birth. With respect to the child itself, we trust that we shall not displease our readers by offering a long quotation.

"The experts,* having examined the woman, will turn their attention to the child. The body will be carefully washed from head to foot. Let it then be ascertained whether it is full grown or premature; if it possesses the colour, volume, length, and weight of an ordinary strong lively child; if it is properly or badly formed externally and internally. They will notice the state in which it was found, the temperature of the place, the quantity and quality of the clothes about it. They will examine whether it has died of inanition, or whether it had taken food; whether the stomach is empty, or contains alimentary matter. They will be careful to attend particularly to the placenta and umbilical cord—whether they are in the natural state, red, spongy, void of, or gorged with blood—whether they exhibit marks of disorganization, or of malformation—whether fresh or otherwise, discoloured, undergoing decomposition or putridity; whether the divided extremity of the cord is equal and uniform, or fringed and irregular; if the ligature has been omitted or applied—before or after cutting through the vessels—whether the ligature be loose or tight—whether blood has been effused by the cord. Although this be a sign that the child was born alive, it does not follow that the want of umbilical hæmorrhage is an unequivocal sign that it died previously; nor do a few drops or clots of blood at the end of the cord prove that it was born alive."

* By "experts," the French writers on forensic medicine mean professional persons employed to examine the state of the case.

Our attention is also to be directed to the circumstances of colour, and state of the vascular system — if it is entirely void of blood, the infant must have died of hæmorrhage; if the arteries only are empty, some other cause has produced death. In examining marks of violence on the body, all their characteristics are to be noticed — as number, depth, extent, figure, situation, colour, &c. This latter is of considerable consequence.

“ With respect to ecchymoses, we must observe whether they are superficial, yellowish, brown, livid, or of a black hue. We are aware that such discolorations prove that the child was alive when the violence was inflicted; ecchymosis can never be produced in a dead body, for after death the capillary vessels contain no blood.”

After inculcating the duty of ascertaining the extent of these injuries, he adds —

“ They must be distinguished from lividities, &c. which form in the lowest part on which a dead body lies, and which depend on the accumulation of blood in the capillaries of the skin. These last are livid spots, brownish, mucous, extended, always superficial, frequently traversed by lines of a whitish colour, more or less deep, according to the folds of the dress, or inequalities of the surface.”

Particular attention is required to ecchymoses about the neck, on the principle that they may exhibit the imprint of the substance by which pressure may have been made there. This is a point of much importance in forensic medicine, and has frequently been urged as evidence of strangulation, where the murder of adults has been the point at issue, as well as of infants. Thus the marks of fingers, of cords, &c. have been distinctly traced. But as strangulation must be supposed practicable by constriction of the os uteri on the neck of the infant, or by a turn of the umbilical cord, it must be of great importance to distinguish between the marks left by these, and such as indicate the application of a string, riband, &c. Much stress has been laid upon the uniformity of the ecchymosis, or discoloration, without abrasion of the cuticle, in the former cases; and upon the irregularity of the mark and the abrasion in the latter. This is the general rule of discrimination; and a Practitioner of ordinary penetration will not require nice instructions as to the variety of modifications that may occur — or if these should be required, he may consult page 374 et seq. of the work before us.

The importance of tumours is likewise very properly insisted on, as these cannot be produced in a dead body. Those about the head are to be carefully considered, in order to distinguish between the consequences of labour and unnatural violence. Wounds and punctures must be searched for, and if there are any, their course must be carefully

traced. Recollecting the various ways in which suffocation is practicable, the propriety of examining the cavities of the nose and fauces will at once appear. Our author alludes to the possibility of pinching the epiglottis, and doubling back the tongue upon that organ.* Fractures and luxations demand inspection, as to the possibility of their having been produced by uterine action, or attempts to expedite delivery.

Having thus cleared the way, by taking a review of all the methods whereby a new-born infant may perish, our author is led to the fundamental query, whether the child was really born alive. A decision to the contrary must necessarily stop the process *in limine*; and it savours of ridicule to add, that if the child did not come into the world alive, it could not be killed after it was born.

As far as we have hitherto gone, there may be little comparative difficulty; for some of the injuries alluded to will show themselves to have been inflicted during life; and the whole of the matter for consideration will resolve itself into ascertaining in what manner they may have been inflicted. We are to suppose, however, that cases will occur where no such sure guides are to be found — where there are either no marks of external violence, or they are of so doubtful a nature that we cannot ascribe them to any sure cause.

“How are we then to decide whether death has been anterior or subsequent to the birth; recent or of some standing; whether the child has respired or not before death; whether its life has been short or of some duration; whether it has been the victim of an innocent or criminal influence?”

He resolves the first of these questions by taking a review of whatever might contribute to kill the child *in utero*, on the part both of the mother and the infant itself. But as these are matters of common consideration in the *pathology*, if we may so term it, of pregnancy, we shall not follow him through the recapitulation. Indeed, there is here a good deal of repetition.

In deciding the question whether respiration has or has not taken place, the lungs have been the principal, and too often the only subject of consideration. While the *foetus* remains in the uterus, dependent for support on the functions of that system, and deriving the power of supporting circulation from the mother, while it continues, as our author expresses it, *the parasite* of the parent, the lungs are in the same inactive state as any other solid part of the embryo — they receive

* This is a method of suicide which has been long upon record, and is said to be practised by some of the negro slaves in the western hemisphere.

support, but perform no functions. When this connexion is interrupted by the birth of a living child, and separation from the mother, the system of the infant is thrown upon its own resources, and its own vital functions are called into action. The air passing into the lungs causes great and important changes in them. Previous to respiration they are found contracted towards the upper and posterior portion of the thoracic cavities, exposing the pericardium, of a mahogany colour, solid structure, firm to the touch, and specifically heavier than water, so that if taken out and placed in a vessel of that fluid, they will sink to the bottom, as would the liver or spleen. If, however, they have inhaled air (or if the lungs, as just described, be artificially inflated), their colour changes to a bright red or pink, their volume is enlarged so as to fill their containing cavities and cover the pericardium. Their consistence is tumid and soft; and if they be now placed in a vessel of water, they will float on the surface.

Such is the old hydrostatic proof of infanticide, or rather of the fact that an infant has been born alive or not, applicable to questions of that nature, upon the ground that there is an inseparable connexion between life and respiration.

On many occasions implicit confidence has been reposed in the result of this experiment, however rudely performed, and without any consideration of exceptions, obstacles, influencing circumstances, or knowledge of objections. These, however, came to be seriously and universally entertained. Practitioners, if not convinced, were confused; and of late the examination of all the circumstances that require attention in these cases has become a matter of so much trouble, if not of complexity, that Practitioners have adopted the more convenient plan of condemning the experiment in round terms, as being absurd and exploded. This opinion has been echoed from the bench, and has thus received no small pseudo-authority; so that juries have ceased to convict for child-murder, and of late these trials end (at the worst) with a verdict of guilty of concealment of birth, which involves a year's imprisonment. With this we acknowledge that we have little or nothing to do. But as the opinion, upon which all this rests, is now to undergo our examination, we cannot avoid protesting against these dicta of our professional brethren—because we are persuaded that they could not speak in this very positive manner if they made their investigations in the way they should be done. Absurd, indeed, it would be to say, from the result of the mere hydrostatic proof, that the child was or was not born alive; because the opinion receives so much more strength, or may, indeed, be discouraged, by taking various other circumstances into

account : and we deny that it has been exploded by scientific research inducing conviction of its inutility. In fact, it is a most important article of a mass of proofs to be drawn from a careful examination of the dead body; no one of which ought to be relied on singly, but all of which would signify very little were not this taken into account.*

In order to do full justice to the import of the state of the lungs in clearing up the question now to be considered, we must remember that there is another change effected on them by means of respiration. Those just alluded to may be artificially produced upon the lungs of a dead body. We may alter their volume, colour, and specific gravity, by blowing into the trachea; but the change to which we now refer can be the consequence of natural respiration alone. While the foetal lungs were yet strangers to the economy of respiration, but a small quantity of blood found its way to them — no more than was required for the supply of their own substance, through the bronchial artery. But after respiration begins, the whole of the circulating fluid must pass through them, and the ramifications of the pulmonary arteries and veins are much distended and filled with blood. Of course, if death does not take place until this state is induced, we must find a material change in the absolute weight of the lungs before and after respiration; and if all children at or immediately after birth were of or nearly of the same weight, there would be no difficulty in coming to accurate conclusions as to the applicability of this phenomenon to the point at issue. This has been called the static experiment, or the test of Ploucquet, to whom we have been indebted for its discovery within the last forty years.

[We are obliged to defer the conclusion of this review to our next Number, in order to make room for the INTELLIGENCE department.]

* There is an opinion very prevalent among medical Practitioners, which stands much in the way of their comfortable performance of their duty towards courts of justice. They are apt to imagine, that by not speaking positively, they may cause a person to be hanged unjustly. The risk is precisely the reverse. But it is their duty to give the grounds in every case, why they may not be able to come to a positive conclusion.

PART IV.

MEDICAL AND PHYSICAL
INTELLIGENCE:

BRITISH AND FOREIGN.

1. Case of Poisoning by the Digitalis Purpurea. By M. CHANTOURELLE.
(Read at the August Meeting of the Société de Médecine).

H., aged sixteen years, experienced, about the commencement of October, 1818, pain at the pit of the stomach: mouth clammy, with a bitter taste. Digestion impaired, along with violent pain of the head. On the 11th very strong and almost incessant palpitations, which remitted at intervals: respiration laborious, pain in the chest, feeling of suffocation. This state continuing, four grains of digitalis were prescribed night and morning, which she was directed to persevere in for a fortnight. On the 30th, M. Chantourelle was called to her: in consequence of having left off the medicine for one day, she had only taken forty grains of the powder. For the three preceding days she had experienced considerable inclination to vomit; and on the 30th, felt a violent pain in the epigastrium, not increased by pressure: the abdomen not tender; constipation. Deglutition followed by a kind of contraction of the œsophagus, in the region of the diaphragm, with a feeling of suffocation: remarkable lentor in the circulation, the pulse only beating thirty-six times a minute, and sometimes thirty-four. *The digitalis to be suppressed, diluents, and an emollient lavement.* In the course of the day repeated vomiting, with violent retching; the rejected matter consisting at first of mucus only, mixed with powdered digitalis, but afterwards, from the inverted action of the stomach, and perhaps of the duodenum, mixed with a considerable quantity of greenish bile; syncope; copious perspiration during the retching; shivering and coldness of the extremities; alternate paleness and redness of the face; anxiety.

The diluents to be continued; an antispasmodic potion with the syrup of diacodium. Progressive diminution of the vomiting during the night.

On the 31st, much nausea in the morning; all the drinks, even the potion, speedily turn acid on the stomach; severe pain in the epigastrium, which is a little tender to the touch; mouth clammy; constipation; belly slightly painful; feeling of contraction of the œsophagus still continues, with the sense of suffocation after swallowing. *Pulse 36. Continuation of the diluents and potion; glysters; spare diet.* In the course of the day three vomitings only, of mucous matter, with a little of the powder.

November 1st, in the morning. Has had no vomiting during the night; pain of the epigastrium more intense, especially on pressure; tongue whitish, with a little red at the edges, and towards the tip; countenance animated. *Pulse from 36 to 40; great sense of suffocation; six leeches to the epigastrium; the bites to be covered with a large cataplasm.*

November 2d. Sense of suffocation has ceased; pain of the epigastrium considerably diminished; vomited once during the morning; some of the powdered digitalis still observable in the rejected matter; bowels open;

abdominal pain announcing the appearance of the catamenia; minced meat passes with difficulty. Pulse 40. *Dilutents; narcotics; cataplasms; glysters, notwithstanding the state of the bowels.*

November 3d. Catamenia have appeared; epigastric pain almost gone. (*A plaster of theriac to the epigastrium, instead of the catuplasm*). No vomiting or nausea; headach considerable. Wishes to take some solid nourishment; digestion impaired; tongue hot.

November 4th. Continues improving; has only taken some minced meat, which passes without difficulty. Able to sit up.

November 6th. Feels very well; tongue a little whitish; still some uneasiness at the epigastrium; slight oppression. Pulse 66. Is only able to take simple broths.

M. Chantourelle concludes from this case, that the powdered digitalis may remain several days in the stomach, adhering closely to the parietes of that organ: as it will be observed, the ejected matter contained the powder four days after its use had been discontinued. M. C. considers that the powdered digitalis, even when given in a very small dose, may accumulate in the stomach, and give rise to very serious symptoms: on this account he prefers the tincture. — *Journal Général de Médecine, Octobre, 1822.*

II. On the Employment of Narcotics in the Form of Vapours.

By M. HUFELAND.

In a late Number of his Journal, this intelligent Practitioner has related twelve cases of epilepsy, in which narcotic fumigations were found of the greatest benefit. In their administration the same bathing apparatus was employed, as is used for the sulphureous vapour: the hyoscyamus and belladonna were chosen by preference, of each of which M. Hufeland took six ounces; and in order to augment their action, ten or even twenty grains of opium were occasionally added: the whole was moistened with a little water, and spread upon an iron spatula, which was heated by means of a spirit lamp, until these substances were reduced to ashes, and the vapours produced by their carbonization had filled the bathing apparatus. The patient was left in this atmosphere for fifteen or twenty minutes. "The ordinary effect of these fumigations consists," says M. Hufeland, "in an increased transpiration, and a slight cerebral congestion: this state is, however, sometimes accompanied with tremors, anxiety, vertigo, and even violent spasms, which proves that this operation requires the superintendence of the Physician, and that the dose mentioned should be varied according to circumstances." — *Nouveau Journal de Médecine, Octobre 1822.*

III. Plan for Curing the Itch in Two Days. By M. BURDIN, Sen.

In a communication made by this gentleman to the *Société de Médecine* of Paris, he professes to cure nine-tenths of his patients in the time above mentioned, by the following method:

On the day of a psoric patient's being received into the Hospital of Groningue, he is well washed with soap and water, and afterwards an ounce of the following ointment is carefully rubbed in:

R Sulphur. sublimat. partes duas,
Potassæ subcarbonat. partem unam,
Adipis suillæ, partes octo;

Fiat unguentum.

On the next day three more frictions of the same extent are employed and on the following day, after being well washed, the patient can, in the generality of instances, be safely discharged cured. — *Journal Général de Médecine, Octobre, 1822.*

IV. *Observations on the Effects produced by the Bile, in the Process of Digestion.* By B. C. BRODIE, Esq., F. R. S., Professor of Anatomy and Surgery to the Royal College of Surgeons, &c.

Various opinions have been entertained by physiologists respecting the office of the liver. Some have supposed that the secretion of bile is merely excrementitious; others that the bile is intended to stimulate the intestine, and to produce a ready evacuation of the fæces; and another opinion has been, that the bile is poured out into the duodenum, that it may be blended with the chyme, and, by producing chemical changes in it, convert it into chyle. The situation of the liver, connected as it is in every instance with the upper part of the alimentary canal, is unfavourable to the first of these hypotheses; but the last is rendered very probable by the circumstance of chylification taking place just at the part where the bile flows into the bowel.

In order that I might arrive at some satisfactory conclusion on these points, I applied a ligature round the choledoch duct of an animal, so as completely to prevent the bile entering the intestine, and then noted the effects produced on the digestion of the food which the animal had swallowed, either immediately before or immediately after the operation. The experiment was repeated several times, and the results were uniform. Before I describe these results, it may be proper to make one further observation. The application of a ligature round the choledoch duct is easily accomplished, and with very little suffering to the animal; so that any derangement in the functions of the viscera, which follows, cannot reasonably be attributed to the mere operation. The division of the stomachic ropes, or terminations of the eighth pair of nerves on the cardia of the stomach, and the ligature of the whole extremity of the pancreas, are operations of much greater difficulty; yet it has been ascertained that neither of these at all interfere with the conversion of the food into chyme, or that of the chyme into chyle.

When an animal swallows solid food, the first change which it undergoes is that of solution in the stomach. In this state of solution it is denominated *chyme*. The appearance of the chyme varies according to the nature of the food. For example, in the stomach of a cat the lean or muscular part of animal food is converted into a brown fluid, of the consistence of thin cream; while milk is first separated into its two constituent parts of coagulum and whey, the former of which is afterwards redissolved, and the whole converted into a fluid substance, with very minute portions of coagulum floating in it. Under ordinary circumstances, the chyme, as soon as it has entered the duodenum, assumes the character of *chyle*. The latter is seen mixed with excrementitious matter in the intestine; and in its pure state ascending the lacteal vessels. Nothing like chyle is ever found in the stomach; and Dr. Prout, whose attention has been much directed to the chemical examination of these fluids, has ascertained, that albumen, which is the principal component part of chyle, is never to be discovered higher than the pylorus. Now, in my experiments, which were made chiefly on young cats, where a ligature had been applied so as to obstruct the choledoch duct, the first of these processes, namely, the production of chyme in the stomach, took place as usual; but the second, namely, the conversion of the chyme into chyle, was invariably and completely interrupted. Not the smallest trace of chyle was perceptible either in the intestines or in the lacteals. The former contained a semi-fluid substance, resembling the chyme found in the stomach, with this difference, however, that it became of a thicker consistence in proportion as it was at a greater distance from the stomach: and that, as it approached the termination of the ileum in the cæcum, the fluid part of it had altogether disappeared, and

there remained only a solid substance, differing in appearance from ordinary faeces. The lacteals contained a transparent fluid, which I suppose to have consisted partly of lymph, partly of the more fluid part of the chyme, which had become absorbed.

I conceive that these experiments are sufficient to prove that the office of the bile is to change the nutritious part of the chyme into chyle, and to separate from it the excrementitious matter. An observation will here occur to the physiologist. If the bile be of so much importance in the animal economy, how is it that persons occasionally live for a considerable time, in whom the flow of bile into the duodenum is interrupted? On this point it may be remarked, 1st, That it seldom happens that the obstruction of the choledoch duct from disease is so complete as to prevent the passage of the bile altogether; and the circumstance of the evacuations being of a white colour may prove the deficiency, but does not prove the total absence of bile. 2dly, That in the very few authenticated cases, which have occurred, of total obliteration of the choledoch duct in the human subject, there has been, I believe, always *extreme emaciation*, showing that the function of nutrition was not properly performed. 3dly, That the fact of individuals having occasionally lived for a few weeks or months under these circumstances only proves that nutrition may take place to some extent without chyle being formed. In my experiments I found that the more fluid parts of the chyme had been absorbed, and probably this would have been sufficient to maintain life during a limited period of time.

In the prosecution of this inquiry, a circumstance occurred, which seems not unworthy of notice, although not immediately connected with the subject of digestion. The ligature applied round the choledoch duct was always a single silk thread, the ends of which were cut off close to the knot. If the animal was allowed to live, he became jaundiced. The *tunice conjunctivæ* of the eyes were tinged with bile, and bile was seen in the urine. But at the end of seven or eight days, I found, in several instances, that an effort was made by nature to repair the injury done by the operation, and to restore the passage of the bile into the intestine. In these instances, on destroying the animal at the end of the above-mentioned period, and exposing the cavity of the abdomen, and then making an opening into the duodenum, I ascertained that on compressing the gall-bladder the bile flowed out of the orifice of the choledoch duct in a full stream, in spite of the ligature. On further dissection, I found that a mass of albumen (coagulable lymph) had been effused, adhering to the choledoch duct above and below the ligature, and to the neighbouring parts, and enclosing a cavity in which the ligature was contained. The pressure of the latter had caused the duct to ulcerate, without adhesion having taken place of the surfaces which had been brought into contact; and the ligature, having been separated from it by ulceration, lay loose in the cavity formed by the albumen which had been effused around it. Into this cavity the bile might be made to flow from the upper orifice, and out of it into the lower orifice of the choledoch duct; and thus the continuity of the canal intended for the passage of the bile was restored. It is still more remarkable that the same thing happened even when two ligatures had been applied on the choledoch duct at some distance from each other.

The physiologist will not fail to observe the difference between the effects produced by a ligature applied to an excretory tube and a ligature applied to an artery or vein. A circumstance nearly corresponding to that which I have now mentioned, has been noticed by Mr. Travers, respecting the consequences which follow the application of a ligature round the intestine. — *Journal of Science and Arts*, No. 28.

V. On the Changes which take place in the fixed Principles of the Egg during Incubation. By Dr. PROUT.

From the experiments which this Physician has performed in order to ascertain some of the changes that take place in the egg during incubation, and thereby to illustrate this difficult point in physiology, he draws the following conclusions:—

1. That the relative weights of the constituent principles of different eggs vary very considerably.

2. That an egg loses about one-sixth of its weight during incubation, a quantity amounting to eight times as much as it loses in the same time under ordinary circumstances.

3. That in the earlier stages of incubation, an interchange of principles takes place between the yolk and a portion of the albumen; that this interchange is confined on the part of the yolk to a little of its oily matter, which is found mixed with the above-mentioned albumen; that this portion of albumen undergoes some remarkable changes, and is converted into a substance analogous in its appearance, as well as in some of its properties, to the curd of milk; and, lastly, that a portion of the watery and saline portion of the albumen is found mixed with the yolk, which becomes thus apparently increased in size.

4. That as incubation proceeds, the saline and watery parts again quit the yolk, which is thus reduced to its original bulk; that in the last week of the process, it undergoes still further diminution in weight, and loses the greater portion of its phosphorus, which is found in the animal converted into phosphoric acid, and, in union with lime, constituting its *bony skeleton*; and, lastly, that this lime does not originally exist in the recent egg, but is derived from some unknown source, during the process of incubation.

Sir Everard Home and Mr. Hatchett have concluded, from their experiments, that the yolk is analogous to the milk of viviparous animals, but more concentrated, and that its chief use is to afford a pabulum to the young animal during incubation. This opinion, which is indeed as old as Aristotle, is corroborated in a striking manner by the present inquiry. Mr. Hatchett has also made the important and curious remark, that in the ova of those tribes of animals, the embryos of which have bones, there is a portion of oily matter; and in those ova whose embryos consist entirely of soft parts, there is none. Hence it is concluded, that a certain portion of oil is necessary for the formation of bone. The present inquiry cannot be said to confirm or invalidate this remark; for although in the earlier stages of incubation, before ossification has commenced, a portion of the oil of the yolk is appropriated to the purposes of the economy of the animal, yet by far the greater portion of it remains; and some of it is even retained by the yolk till its final disappearance. One great use of the yolk evidently is, to furnish the phosphorus, entering as phosphoric acid, into the skeleton of the animal; but that the earthy portion of the bones is derived from the transmutation of the oil into lime, cannot, perhaps, be safely asserted in the present state of the inquiry.

With respect to the earthy matter found in the skeleton of the chick when it quits the shell, I think I can venture to assert, after the most patient and attentive investigation, that it does *not pre-exist in the recent egg*; certainly not, at least, in any known state. The only possible sources, therefore, whence it can be derived, are from the shell, or transmutation from other principles. Whether it be actually derived from the shell, cannot be determined by chemistry; because, as we have seen, the shells of different eggs differ so much, that the application of averages is out of the question, and we are of course precluded from ascertaining the exact quantity of lime any particular shell originally contains. There are,

nowever, very strong reasons for believing, that the earthy matter is not derived from the shell. In the first place, the *membrana putaminis* never becomes vascular, and seems analogous to the epidermis; hence the lime of the shell, which is exterior to this membrane, is generally considered by physiologists as *extra-vascular*. It is, therefore, extremely difficult to conceive how the earth in question can be introduced into the economy of the chick from this source, particularly during the last week of incubation, when a very large portion of the membranes are actually separated from the shell. Secondly, both the albumen and yolk contain, at the end of incubation, a considerable proportion of earthy matter (the yolk apparently more than it did originally); why is this not appropriated, in preference to that existing in the shell? In opposition to these arguments, it will be doubtless stated, that the shell of the egg becomes brittle at the end of incubation, and appears to undergo, during that process, some other changes not at present understood. To which it may be answered, that this brittleness has been attributed to the separation of the *membrana putaminis*, and the exsiccation of the parts by so long an exposure to the heat necessary to the process of incubation; and in this manner, all the *known* changes produced on the shell by incubation may perhaps be satisfactorily accounted for. Until, therefore, it be demonstrated that some other changes take place in the shell, I confess this argument does not seem to me to have much weight. I by no means wish, however, to be understood to assert, that the earth is *not* derived from the shell; because, in this case, the only alternative left me, is to assert that it is formed by transmutation from other matter,—an assertion which I confess myself not bold enough to make in the present state of our knowledge, however strongly I may be inclined to believe that, within certain limits, this power is to be ranked among the capabilities of the vital energies. — *Philos. Trans.* Vol. II. 1822.

VI. On *Sarsaparilla*. By RICHARD BATTLE, Chemist.

[To the Editor of the Medical Repository.]

SIR,

In Volume XI., p. 190, of the *REPOSITORY*, I submitted some observations upon *sarsaparilla*, on which occasion I ventured to assert, “as the result of direct experiment, that its medicinal properties reside exclusively in the *cortical part*, and that such properties may be effectually disengaged by infusion in cold water;” and I mentioned, at the same time, my intention to offer some communication on the component parts of this root.

I find it necessary particularly to distinguish the several growths of *sarsaparilla*, as ordinarily designated, viz.:—

Honduras.

Lisbon, or Brazilian.

Jamaica, or red bearded.

The quantity of extract derived by means of distilled water from these several growths varies considerably; the following quantities having been obtained upon repeated experiments on each description, namely:—

From 874 grains of the *bark* of Honduras,..... 230 grains of extract.

From the same quantity of Lisbon,..... 248 ditto.

From the like quantity of Jamaica, or red bearded,..... 484 ditto.

From three pounds of the *entire* root of Honduras, 6½ oz.

From the same quantity of Lisbon,..... 7 oz.

From the like quantity of Jamaica, or red bearded, 16 oz.

The communication which follows has regard to the Jamaica, or red bearded sarsaparella only.

I proceed to show the extractive power of different menstrua:—

874 grains of the entire root in lime water had lost in redrying,	140 grains.
The same in distilled water,	175 ditto.
In distilled water, liq. potassæ being added in the proportion of a dram to a pint,	190 ditto.
In distilled water, liq. ammon. being added in the same proportion,	196 ditto.

Alcohol does not act sensibly, either cold or hot, upon this root; but when so reduced by distilled water, as to boil at a temperature of 184°, a sensible effect is produced.

One pound of the sarsaparella immersed in twelve pints of distilled water, produced a result in the proportion of 175 grains above mentioned. When in solution sufficient sulphuric acid was added to render it somewhat sour. The quantity being reduced by evaporation to three pints, or thereabouts, when cool, presented the appearance of discoloured ice in a fluid of reddish brown, which was poured off. The remaining substance, upon being washed repeatedly in distilled water, and dried, weighed 406 grains. It was then boiled repeatedly in alcohol, in which process the weight was reduced to 198 grains, the difference having been found, upon the evaporation of the alcohol, to have been separated by that agent. The remainder (198 grains), was wholly dissolved in a pint of distilled water, having been first triturated together with two drams of liquor potassæ.

A process similar to the first above mentioned having been used with nitric instead of sulphuric acid, 412 grains were reduced by the alcohol to 250 grains.

Half an ounce of the wood from which the extract had been procured by means of Papin's digester, exposed to a temperature of 120°, in diluted nitric acid, at the expiration of several days was reduced to a gelatinous state of a pale yellow colour. In drying part of this gelatinous matter at a low temperature, a crystalline mass was formed, which partly dissolved in boiling alcohol; and on the solution cooling, re-formed in beautiful needle-like crystals. The solution was very bitter. Water wholly dissolves the crystals, this solution becomes intensely bitter, and in reforming, the crystals differ as to shape from those formed by the alcoholic process.

I also discover crystals beautifully formed on the surface of the extract, and an interesting subject of inquiry arises—namely, what are the crystalline formations now observed? In the extract they appear but sparingly, in comparison with the quantity obtained from the woody part, after being apparently exhausted of the extract or medicinal properties. This inquiry I shall continue to prosecute to the utmost extent in my power, but the processes which I find it necessary to adopt, do not admit of any other than slow and gradual progress.

And here I am induced to state, that decomposition effected in the usual manner does not separate and reproduce or deliver the elements of the subject acted upon, free from new combinations of matter; on the contrary, I apprehend that new combinations are produced. For instance, in procuring a salt by the use of chemical agents, I conceive that the substance procured is a compound partaking of the quality of the agent employed: whereas my aim is to produce a salt, such salt being a component or elementary part of the subject acted upon.

I shall avail myself of an early opportunity of again addressing you on this subject; remaining,

SIR,

Your obedient Servant,

RICHARD BATTLE.

Fore Street, Cripplegate,
January 24, 1843.

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VII. *On the Properties and Functions of the Nervous System, in the Vertebrated Animals.* By M. FLOURENS.

According to M. Flourens, there are two properties essentially distinct in the nervous system: the one to excite muscular contraction, the other to perceive impressions. The object was to determine experimentally what parts of this system serve exclusively for sensation; and what, on the contrary, serve exclusively for contraction.

It is evident, that the trial of each part could alone ascertain its property. M. Flourens has therefore subjected to trial, separately and in turn, the nerves, the spinal marrow, the medulla oblongata, the tubercula quadrigemina, the cerebellum, and the cerebral lobes. From these experiments, thus chalked out, it follows:—

1st. That the nerves, the spinal marrow, the medulla oblongata, and the tubercula quadrigemina, are capable of exciting muscular contractions.

2d. That the cerebral lobes and the cerebellum are not capable of exciting them. Haller and Zinn had formerly noted the impossibility (insensibility) of the upper layers of the cerebral lobes; Lorry, that of the corpus callosum; M. Flourens has, for the first time, observed this insensibility in the whole of these lobes, in the cerebellum; and has been the first to fix the limit at the tubercula quadrigemina.

The irritation of a nerve, separated from the nervous centres by section or ligature, is confined to the excitement of abrupt and partial contractions in the muscles to which this nerve is distributed. The nerve, therefore, excites properly only contractions.

The spinal marrow being cut successively above the posterior enlargement, above the anterior, and near to the occiput: at first the animal lost the use of its hind paws, then of its fore paws, and next of the trunk; but in all these cases, all these parts, the hind and fore paws, as well as the trunk, preserve their collective movements (*mouvements d'ensemble*).

We ought to add, that these movements take place only in consequence of external irritations. What has disappeared is, first, the co-ordination (consentaneity) of the movements in leaping, flying, walking, standing, catching, &c.; and, secondly, the volition of these movements.

What remain, are the contractions and the connexion of these contractions in associated movements. The spinal marrow, then, properly ties the muscular contractions, in associations (*mouvements d'ensemble*) as to volition and the co-ordination of these movements that resides elsewhere.

The irritation of the spinal marrow constantly occasions violent convulsions; its destruction speedily brings on death; but this last effect depends on its action on the involuntary movements. Constantly, the abstraction of one of the tubercula quadrigemina causes the sight of the opposite eye to be lost. The irritation of a tuberculum determines contractions in the opposite iris; its complete removal abolishes the contractions completely. In the tubercula, therefore, the primary principle of the action of the iris and of the retina resides.

In proportion as we cut off the cerebellum, by successive layers, the animal loses gradually the faculty of flying or running; then that of walking, and, finally, that of standing upright.

A single cerebral lobe being removed, the animal loses immediately the sight of the opposite eye; but the contractility of the iris of this eye continues, notwithstanding the animal experiences at first a weakness much more marked on the opposite side of the body. In other respects, it goes on as usual. The two lobes being removed, there is no longer any vestige of volition, or of memory, or of any perception; memory, volition, perception, reside then in the cerebral lobes.

Experiment 1st.—M. Flourens removed the cerebellum in successive layers from a pigeon; at the taking away of the first slice, the animal

experienced but little weakness and hesitation in its motions. At the middle layers, its walk became unsteady and agitated, altogether like that of a drunken person; soon it could not walk without the assistance of its wings. The sections being continued, the animal lost altogether the faculty of walking; its feet were no longer sufficient to support it, and it had to sustain itself on its tail and its wings; it often attempted to walk or fly, but always without success. If it was pushed forward, it tumbled over its head; if backwards, it rolled on its tail. The sections were carried farther; the animal then lost the faculty of keeping itself upon its wings and its tail; it tumbled continually, without being able to stop in any fixed position, or it finally rested flat on its back or belly. In other respects, it saw and heard very well; its air was lively, its head erect, and spirited.

Experiment 2d.—M. Flourens removed from a pigeon the right cerebral lobe; the animal lost instantly the sight of the left eye; but the contractility of the iris of that eye continued unchanged. There was also a marked feebleness in the right side of its body. With the exception of these two circumstances, the animal was well; it sustained itself, walked, ran, flew, saw with the other eye, understood, wished, felt as usual. The other lobe being removed, the sight of both eyes was instantly lost, but not the contractility of the iris. There was at first a very distinct general debility. Otherwise, the animal held itself perfectly upright on its feet; and in whatever position they put it, it maintained its equilibrium. It walked, when pushed; it flew, when tossed into the air: but left to itself, it remained plunged as it were in a continual stupor. It never moved, except in proportion as it was irritated; it gave no sign of volition. Memory, vision, hearing, will, all its perceptions were extinguished. There is none of his numerous experiments which M. Flourens has not repeated on each of the four classes of vertebrated animals; and he has always indicated the shades of greater or less depth, which characterize these classes.

Since the nervous parts, from which sensation is derived, are distinct from the parts from which movement flows, we may conceive the possibility of determining at pleasure distinct palsies of feeling and motion. The most striking example of this real insulation, is that of the wonderful coincidence of the loss of vision with the preservation of the contractility of the iris. There are two means of destroying vision, without departing from the cerebral mass; one, the removal of the cerebral lobes, which causes the loss of sensation in the eyes; another, the removal of the *tubercula quadrigemina*, which occasions the loss of motion. Finally, the cerebral lobes being removed, the animal cannot commence any motion; but if a motion be begun, it continues. It does not walk spontaneously, but it walks if pushed. It is no longer volition which determines its movements; but an external irritation may supply its absence, and determine them like volition.—*Journal of Science and Arts*, No. 28.

VIII. *New Process for extracting Strychnine (Strychnia).* By M. HENRY.

This process consists in treating, at several times, nux vomica reduced to powder, with hot water in close vessels. When the decoctions are finished, they are mixed together, and evaporated to the consistence of a thick syrup, to which powdered lime is to be added in slight excess. This forms, with the igasuric acid, an insoluble salt, which, mingled with the strychnia and other substances, forms a gelatinous mass. This matter must be treated with hot alcohol, at 38° of the hydrometer, which dissolves the strychnia, and a little colouring matter, but which does not act on the other substances. The action of the alcohol is repeated twice, or till it acquires no bitter taste. The sediment is subjected to the press. The alcohol is filtered, and then distilled off in a water-bath. There remains in the retort a very small quantity of a deep-coloured liquid, and a substance in the form of brilliant crystals. These are strychnia, containing a colouring and oily matter; if it be treated several times with alcohol, we obtain it very

pure. It is indeed more expeditious to form an easily crystallizable with it, for which purpose dilute nitric acid is preferred by M. Henry. The nitrate solution, after concentration, is treated with animal charcoal at a boiling heat, and quickly filtered. On cooling, the salt forms in slightly coloured crystals, which can be purified by solution and re-crystallization. To obtain strychnia from this salt, we pour into its solution a excess of ammonia, when the vegetable alkali precipitates in a powder. The nitrate must be dissolved in the least possible quantity of water, as the strychnia itself being somewhat soluble, a portion would be left in the liquid.

The whole strychnia may be separated from the mother water by concentrating them, and adding anew pulverized quick lime, and treating the mass with alcohol. One kilogramme of pulverized mass yields from five to six grammes of strychnia. — *Journ. de Phar.*, Sept.

IX. Fusion of Charcoal by Hare's Deflagrator.

Mr. Hare had some time ago observed, that the charcoal points, when ignited by the instrument, "assumed a pasty consistence, and appeared to be in a state of fusion." This most important fact seems to have been proved beyond a doubt by Professor Silliman, who has obtained some very curious and valuable results with the Deflagrator.

When the charcoal points were brought into contact, and then withdrawn a little, the most intense ignition took place. The charcoal part of the positive pole shot out and increased from the 10th to the 8th, and sometimes to the 4th of an inch in length. The charcoal of the negative pole, on the contrary, was diminished, and a circle-shaped cavity was formed at the end of it, as if the matter had been actually transferred to the positive pole, by a current flowing from the negative to the positive pole. In various experiments, Professor Silliman concludes, "that there is a current of carbon from the negative to the positive pole, and that carbon is actually transferred by it in that direction," probably in the state of vapour.

Upon examining with a microscope the projecting point of the positive pole, it exhibited decisive indications of having undergone a real fusion. It presented a mamillated appearance, and its form was that of an aggregate of small spheres. Its surface was smooth and glossy, as if covered with a varnish. Its lustre was metallic, and it had entirely lost the fibrous appearance. It resembled brown hematite. The pores of the charcoal had all disappeared, and the matter had become sensibly harder and heavier. — *Silliman's Journal*, vol. v. p. 108—112.

X. Population of Russia, and Instances of Longevity.

In the year 1817, the number of births in Russia is stated at 780,000 boys, and 711,796 girls; the number of deaths at 423,092 males and 405,469 females, of whom 208,954 died under five years of age. The increase of population was 670,045. The number of individuals who attained the age of

60 years, was	-	-	-	68,723
70	-	-	-	38,764
80	-	-	-	16,175
90	-	-	-	2,108
100	-	-	-	783
115	-	-	-	83
120	-	-	-	51
125	-	-	-	21
130	-	-	-	7
135	-	-	-	1
140	-	-	-	1

Total - 126,717

which is about a seventh part of the deaths.

XI. UNIVERSITY OF GLASGOW.

[We are indebted to our correspondent, Dr. KENNEDY, for the following particulars respecting this rising Medical School.]

The Medical Prelections in the University of Glasgow, for the Session 1892-93, commenced early in November.

Surgery, Mr. Burns; Chemistry, Dr. Thomson; Midwifery, Mr. Towers; Practice of Physic, Dr. Freer; Anatomy and Surgery, Dr. Jeffray; Theory of Physic, Dr. Freer; Dietetics, Materia Medica, and Pharmacy, Dr. Millar; the Lectures on Botany early in May, Dr. Hooker.

Every student obtains the right of getting books from the Library.

Regulations respecting Degrees in Medicine and Surgery.

MEDICINE. — 1. Before any person can be allowed to be a candidate for a degree in medicine in this University, he shall appear personally before the senate, or committee of examiners, and lay before them satisfactory evidence that he is not under twenty-one years of age.

2. He shall produce evidence as above, that he has, during at least three years (or sessions of six months each) regularly attended the following medical classes, in some university or universities, viz. Anatomy, during three such sessions; the theory and practice of physic, during two such sessions; chemistry, during two sessions; materia medica, during two such sessions, or one session, if he shall have attended an Apothecary's shop during two or more years; midwifery, during one session; the principles and practice of surgery, during one session; botany, during one course, together with at least two years' attendance at a public hospital. Two courses, of between three and four months each, on any of these subjects, given by eminent medical teachers in London, or one six months' course on anatomy, and on the practice of physic, delivered in the Royal College of Surgeons in Dublin, will be allowed as a course (on these particular branches) at an university.

3. He shall bring forward evidence, that during one year, at least, he has attended medical classes in this university.

4. The candidate shall undergo three examinations, in private, by the medical professors of the university; and write a commentary on an aphorism of Hippocrates, and another on a case of disease, propounded to him by the said examiners. The first examination shall be on anatomy and physiology; the second on the institutions and practice of physic; and the third on chemistry, materia medica, and pharmacy.

5. The examiners shall report to the senate their opinion respecting the medical knowledge of the candidate; and, if the report be favourable, his name, as a candidate for a degree, shall be entered on the minutes of senate; and a day shall be fixed, when the candidate shall read his commentaries on the aphorism and case; and answer such questions, on the several branches of medical science, as shall be put to him by the examiners, in presence of the senate. If the senate be of opinion that the candidate has shown himself worthy of a degree, it shall be conferred, in presence of the senate, by the vice-chancellor, provided the candidate has not published a thesis, which he may or may not do, according to his own option; but, if he shall have published a thesis, he must defend it, and the degree must be conferred in presence of the students and other members of the university, assembled by program in the comitia.

6. The three first examinations are usually conducted in the English language, the remainder in Latin; and the commentaries on the aphorism and case must be written in the Latin language.

SURGERY. — 1. Every candidate for a degree in surgery shall intimate to one or other of the medical professors his wish to be received upon trial; and, at the same time, produce evidence that he has attended the following courses, of six months each, by professors or lecturers in an university, one of which sessions must be at this university, viz.: — Two courses on ana-

tomy, one course on the principles and practice of surgery, one course on the institutions of medicine, one course on the practice of medicine, one course on materia medica and pharmacy, one course on chemistry, one course on midwifery, together with at least twelve months' attendance at a public hospital. As in the curriculum of education for degrees in medicine, two courses given by eminent medical teachers in London, or one six months' course on anatomy and the practice of medicine delivered in the Royal College of Surgeons in Dublin, will be allowed as one course at an university.

2. No candidate shall be admitted to examination before the third week in March of his last year's course of study.

3. The candidate shall be examined on all the above branches by the medical professors of the university.

4. If the examiners approve of the answers of the candidate, they shall make their report accordingly to the senate; and, if approved of by the senate, a day shall be appointed for conferring the degree, in presence of the senate, by the vice-chancellor, after the candidate shall have taken and subscribed the usual oath.

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

1. An Essay on the Medicinal Efficacy and Employment of the Bath Waters; illustrated by Remarks on the Physiology and Pathology of the Animal Frame, with reference to the Treatment of Gout, Rheumatism, Palsy, and Eruptive Diseases. By Edward Barlow, M.D., Graduate of the University of Edinburgh, Member of the Royal College of Surgeons in Ireland, one of the Physicians of the Bath Hospital, and of the Bath City Infirmary and Dispensary, and Physician of the Charitable Society for the Relief of Lying-in Women. Bath, 1822. Pp. 200.

The reader of the volume before us will be agreeably surprised to find that it is not a dry and hackneyed treatise on the Bath waters alone; in fact, it can be no more said to be worthy of that title, than a pathological account of diseases, where an unimportant remedy is employed, can be said to be a treatise on the medicinal efficacy of that remedy. The pathological doctrines which the author espouses, were detailed by him in the ninth and tenth volumes of the Edinburgh Medical and Surgical Journal: we cannot at present enter into the consideration of these views, as we shall perhaps have occasion to refer to them hereafter; we may merely observe, that he seems to us to be what the Italians might call a *contro-stimulant*. The work contains several interesting cases of the diseases mentioned in the title page, and may be consulted with greater advantage than its title would seem to import.

2. A Case of Transverse Fracture of the Patella, in which perfect Osseous Union was performed; with Observations. By George Fielding, Member of the Royal College of Surgeons in Edinburgh; one of the Surgeons to the Infirmary, to the Lying-in Charity, and to the Female Penitentiary in Hull. 8vo. sewed. Pp. 10. 1822.

Although it was at one time the prevalent idea that fractures of the patella were always reunited by the intervention of a ligamentous substance, so many cases of perfect bony union have of late years been observed, that the circumstance ceases to be possessed of novelty. In the case which Mr. Fielding has detailed, the fracture occurred in a tall well-proportioned woman, whilst in the act of raising a very heavy basket; the fracture was, under such circumstances, necessarily transverse. In the reduction, Mr. Fielding followed Des-

sault's plan : by keeping the head and shoulders well elevated, extending the limb, and retaining it in that position by means of a long splint applied posteriorly, placing the extremity upon an inclined plane, having the heel highest, and preserving the fractured ends of the patella *in situ*, by lightly compressive bandages. At the end of a month, the bone was found to be firmly united, without the intervention of ligament. The patient was able to leave her room before the end of the sixth week, and she at present enjoys the use of the limb as perfectly as before the accident. A similar case to the preceding lately occurred in the practice of an intelligent friend of ours, where an analogous treatment was pursued, and with equally successful results. There is one remark of Mr. Fielding's which very much astonished us, and which, proceeding from a man of his experience, may, at first sight, obtain some credence, viz. that *transverse* fractures of the patella are of rare occurrence, when compared with *longitudinal*.

This, we have no hesitation in saying, is decidedly erroneous. Whenever the fracture is produced wholly by the action of the muscles, as was the case in the history related by Mr. Fielding, the fracture must of necessity be *transverse*; a *longitudinal* fracture can only be produced by the immediate application of external violence. We certainly are not able to say what species of fracture may have predominated in Mr. Fielding's practice; but we are quite satisfied, that if he will call to mind the manner in which they were produced, he will find, that whenever muscular action has been the occasion, the fracture was transverse, and that the longitudinal, as before observed, is always occasioned by external violence. That the great majority of fractures of the patella are transverse, Mr. Fielding will find stated by every scientific writer upon the subject.

FOREIGN.

1. Pharmacologie Magistrale, avec des Considérations Thérapeutiques, Pathologiques, et Physiologiques; précédée d'une Etude Sommaire de l'Art de Formuler, et suivie d'un TABLEAU SYNOPSIS de Matière Médicale. Par Fulgence Fiévée (de Givry, Hainaut), Docteur en Médecine, Membre de plusieurs Sociétés Savantes, &c. Paris, 1822.

This work is very carefully and clearly written; the formulæ seem tolerably well chosen, and the pharmaceutical descriptions are very correctly given.

2. Table Synoptique des Poisons, dressée d'après les Travaux les plus Récents d'Histoire Naturelle, de Thérapeutique, et de Médecine Légale, &c. Par Eusèbe de Salle, D. M. Deux feuilles, format Atlantique.

These Tables are merely a French version of the *Toxicological Chart* of Mr. Stowe, and contain the same omissions; thus, although iodine is known to irritate, and even ulcerate the coats of the stomach, we have no mention made of it by either of the gentlemen above mentioned. The poisonous gases are also passed over in silence by both. As far as they go, however, the tables before us seem tolerably well executed: the symptoms, treatment, and tests, are arranged, like Mr. Stowe's, under separate columns, and are given with tolerable correctness.

WORKS RECEIVED FOR REVIEW.

Illustrations of the Inquiry respecting Tuberculous Diseases. By John Baron, M.D., &c. 8vo. with Plates. Underwoods, London, 1822.

A Treatise on the Epidemic Puerperal Fever of Edinburgh, 1821, 1822. With an Appendix, containing the Essay of the late Dr. Gordon on the Puerperal Fever of Aberdeen, in 1789—1792. By William Campbell, M.D. 8vo. Edinburgh, 1822.

Thoughts on the Present Character and Constitution of the Medical Profession. By F. C. Speer, M.D., M.R.I.A., &c. 8vo. Whittakers, 1823.

THE METEOROLOGICAL JOURNAL,
From DECEMBER 20th, 1822, to JANUARY 19th, 1823.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50, High Holborn.

December.	Moon.	Rain Gauge.	Therm.			Barom.		De Luc's Hygrom.		Winds.		Atmo. V.	
			9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.
20			28 34	26 30	18 30	16 30	16 71	73 E	E	Fine	—	—	—
21	D		27 34	29 30	15 30	09 30	09 75	72 E	E	Fine	—	—	—
22			34 38	33 30	03 29	95 74	71 E	ENE	ENE	Fine	—	—	—
23			38 39	34 29	90 29	87 74	85 E	E	E	Fine	—	—	—
24			38 34	31 29	88 30	00 82	75 E	SE	SE	Clo.	—	—	—
25			34 34	27 30	26 30	29 65	74 ESE	E	E	Fine	—	—	—
26			30 31	28 30	27 30	25 81	75 E	ESE	ESE	Fine	—	—	—
27			30 34	21 30	17 30	30 81	79 ESE	SE	SE	Fog	—	—	—
28	☉		23 31	22 30	12 30	04 77	71 SE	SE	SE	Fine	—	—	—
29			30 30	20 29	95 29	86 80	72 SSE	SE	SE	Fine	—	—	—
30			24 30	26 29	70 29	62 72	70 SE	ESE	ESE	Fair	—	—	—
31			28 30	28 29	59 29	56 08	74 ESE	SE	SE	Fair	—	—	—
1		Rain Gauge Frozen.	29 38	28 29	60 29	60 77	80 SW	SSE	SSE	Fog	—	—	—
2			30 41	38 29	63 29	71 90	74 S var.	SSE	SSE	Rain	—	—	—
3			41 46	40 29	68 29	61 81	75 SE	SE	SE	Clo.	—	—	—
4			40 48	37 29	58 29	59 77	81 SE	SE	SE	Fair	—	—	—
5			38 42	39 29	54 29	57 95	96 SE	SSW	SSW	Rain	—	—	—
6			44 46	35 29	72 29	90 97	95 SSW	SE	SE	Clo.	—	—	—
7			37 42	33 29	96 30	02 87	85 ESE	E	E	Clo.	—	—	—
8			34 38	27 30	03 29	96 86	90 E	E	E	Clo.	—	—	—
9			30 35	27 29	87 29	77 87	82 E	ESE	ESE	Clo.	—	—	—
10			32 34	26 29	77 29	69 81	87 E	E	E	Clo.	—	—	—
11			26 36	23 29	73 29	79 80	75 E	E	E	Fine	—	—	—
12	D		24 30	24 29	61 29	67 71	75 ENE	NNE	NNE	Fair	—	—	—
13			26 30	21 29	55 29	51 86	70 ENE	NW	NW	Sno.	—	—	—
14			22 30	22 29	43 29	58 76	75 SE	SE	SE	Fog	—	—	—
15			25 30	24 29	12 29	18 86	89 NE	NE	NE	Sno.	—	—	—
16			26 30	23 29	22 29	22 90	85 N	NNW	NNW	Clo.	—	—	—
17			28 30	27 29	25 29	25 87	82 NNE	NW	NW	Clo.	—	—	—
18			30 31	16 29	23 29	27 85	86 NW	N	N	Clo.	—	—	—
19			17 21	12 29	31 29	44 85	87 NNW	ENE	ENE	d. fog	—	—	—

The quantity of rain that fell in December was 1 in. and 40-10

NOTICE TO CORRESPONDENTS.

Communications have been received from Dr. Heincken, Mr. Gaitskell, Mr. Jones, Mr. Betty, Mr. Thompson, and Mr. Hor

. Communications are requested to be addressed (post p
 Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 111. MARCH 1, 1823. VOL. XIX.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Reasons for concluding that the Doctrine of Contagion in Epidemic and Pestilential Diseases was wholly unknown to the Ancients; and that the generic term Plague is improperly applied to particular Pestilences: in refutation of the grounds upon which the Royal College of Physicians of London founded their Report to the Privy Council, dated March 31st, 1818. By CHARLES MACLEAN, M. D., Knight of the Spanish Order of Charles III.; Member of the Medical Academies of Madrid, Barcelona, &c.; commissioned by the Spanish Government to examine the Fever of Barcelona, in 1821.

(Concluded from page 126.)

LET us now examine the historians. Does Herodotus speak of contagion in the pestilences of ancient Egypt? On this head, I shall quote some pertinent and remarkable observations of that honest French traveller, Dr. Pouqueville: "Herodotis antiquissimi scriptorum ætate, Egyptus salubritate gaudebat, civitates opulentissimæ undiquè assingebant, undique plebs innumerabilis terram uberrimam incolebat. Sed cum barbari, institutionum optimarum, legumque con-

temptores, has regiones invasissent, tunc monumenta et oppida cæcidere, tunc cultura neglecta fuit, et *ex summis miseriis, lues erumpens*, his sedibus incubuit.”*

Respecting the opinion of Thucydides concerning the cause of the plague of Athens, so often alluded to, but never fairly quoted, I do affirm, after attentive consideration, that his history does not contain a sentence or an expression that can be tortured into a meaning resembling the modern ideas of contagion. If there were no other reason for disbelieving that the genuine text of Thucydides could have contained any mention of, or allusion to the doctrine of contagion, it would be quite incredible that a historian, who was the cotemporary and countryman of Hippocrates, should have recorded a doctrine of such importance to have been generally known, or to have prevailed, in their days, on a subject of medicine, in Greece, respecting which the great father of physic was wholly silent; and from whose silence absolute ignorance of such a doctrine must inevitably be inferred. Indeed, he very plainly informs us that he does not intend to give an opinion. His words are these: “Now, let every man, Physician or private person, say, according to his knowledge, what the origin of this distemper might be, or what causes might be sufficient to produce so great an *alteration*. *For my own part*, having been ill of it myself, and seen others that were so too, I shall now declare what the *manner* of it was, that, if ever it should happen again, nobody, who reflects upon it; may be at a loss through ignorance.”† I have chosen to follow Dr. Clifton’s translation, because, in what relates to this subject, it is the most honest and the most accurate. Notwithstanding this explicit declaration, and the absence of all mention of any notions of the cause, resembling any of the versions of the modern doctrine of contagion, we find it very gravely stated, in the work of a Physician of some reputation upon pestilence, that “Thucydides makes the *infection* a part of his description of the plague of Athens.”‡ That part of the history of Thucydides which refers to this pestilence, it is well worthy of remark, has been variously translated, or rather mistranslated. Dr. Smith, Dean of Chester, for instance, thus renders a certain passage: “And that mutual tenderness, in taking care of one another, *which communicated the infection*, and made them drop like sheep.” But, as if conscious of inaccuracy, he states that the passage is so ren-

* De Peste Orientali, pp. 9, 10.

† Clifton’s Hippocrates, p. 96.

‡ City Rem. Vol. I. p. 149.

|| Vol. I. pp. 166, 167.

dered on the authority of Dr. Mead, and acknowledges that Lucretius gives it another turn :—

“ Nam quicunque suos fugitabant visere ad ægros
Vitæ nimium cupidi, mortisque timentes,
Peribant paulo post turpi hoste malaque
Desertos, opis expertes, incuria mactans,
Lanigeras tanquam pecudes, et bucera sæcla.”

Every one *now* knows the value of Dr. Mead's authority on this subject, which, without going quite so far as Horace Walpole, who, in one of his letters to Mr. Cole, considers him as nothing better than a mere pretender, I cannot admit to have any weight; whilst no one can decently affect to believe that Lucretius was not much better acquainted, both with the opinions of the age in which he lived, and with the meaning of Thucydides. The same passage is very differently, and much more correctly translated, by Dr. Clifton: “ And their dying like sheep, *infected by their care and concern for others*, increased their despair.” The sense of these translations is widely different; and it is quite evident that the Dean of Chester must have been misled by Dr. Mead. Indeed, nothing can be clearer than that, if the Athenians, or any other ancient people, had entertained the modern notions of contagion, they would not have attended their sick relations as they did. The fact was, of course, observed by them, that those who were constantly with the sick were more liable to be affected than others; and this they imputed to the right cause, fatigue of body, affections of the mind, and foulness of air: but never to contagion.

The narrative of a simple fact by Thucydides is grossly perverted by the translators, in order to accommodate his text to the modern doctrine of contagion. The difference of the following versions of a certain passage of the celebrated Greek historian, as translated at different eras, will at once show the fact and the source of this perversion, as well as the looseness generally of the translations of that excellent writer. In 1534, before the doctrine of contagion in epidemic diseases was authoritatively promulgated, the passage in question was thus translated into French by Claude de Seyssel, Bishop of Marseilles, and afterwards Archbishop of Turin: “ Mais tout celuy nouveau secours et laustre armee qui y estait aparavant, ny peut riens faire a cause de la peste qui se mit parmy eux laquelle ceusx qui estoient venuz avec Agnon, avoient apportee: car aparavant les autres nen avoient point senty.”* Here there is no mention of communication or

* P. 35. Lyon, 1534. But it was first published at Paris in 1527.

contagion. The facts are simply stated, that the plague had introduced itself among the troops, that it was brought by the reinforcement which was conducted to the siege of Potidæa by Agnon, and that it had not previously existed in the division of the army which was before that place. All this amounts to nothing, but that one division of the army was afflicted with the disease before the other: it does not, by any means, affirm that it was *communicated* by the one division to the other. If such an idea had prevailed, it would have been mentioned in precise terms by Thucydides; and precautions would, in consequence, necessarily have been adopted by the Athenians, in order to prevent the spreading of the disease by communication, which precautions and their results would also have been recorded by the historian. But no such records are to be found: on the contrary, Thucydides expressly declines any conjectures respecting the cause of the malady. His text relating to this subject, as rendered by Hobbes* and by the Dean of Chester,† is therefore grossly misinterpreted. Their translations are as follows: "For the sickness coming amongst them, afflicted them mightily indeed, and even devoured the army. *And the Athenian soldiers, which were there before, and in health, caught the sickness from those that came with Agnon.*"‡ The words in italics are very different from the translation of the Archbishop of Turin: "*car auparavant les autres nen avoient point senty.*" The sense of Thucydides is completely altered by Hobbes, rendering it conformable to the doctrine of contagion prevailing in his time. In the same manner, the Dean of Chester: "For the plague followed them even hither, and making grievous havoc among the Athenians, destroyed the army; so that even those soldiers that had been there before, and had from the beginning of the siege been in perfect health, caught the infection from the troops brought thither by Agnon."§ Thus we find, that the translations of Mr. Hobbes and the Bishop of Chester are very different in meaning from that of the Archbishop of Turin; which, there can be no doubt, would have also made express mention of the doctrine of contagion, had that translation been written, instead of in 1527, subsequently to 1546.

It is very clear, then, that this passage of Thucydides does not fairly admit of the interpretation now given to it; and that, if it did, it must be deemed spurious, since the context does not supply us with any proof of the belief of the

* P. 75. London, 1676.

† Vol. I. p. 172.

‡ Hobbes, p. 75. London, 1676.

§ Dr. Smith, Dean of Chester's Translation of Thucydides, I. 172.

historian in that doctrine, or rather supplies us with complete proof of his ignorance of its existence. The same reasoning holds good of the works of Galen and Aristotle.

"The works of Aristotle," says the author of the *Curiosities of Literature*,* "have come down to us accidentally, but not without irreparable injuries, and with no slight suspicion respecting their authenticity. The story is told by Strabo in his thirteenth book. The books of Aristotle came from his scholar Theophrastus to Neleus, whose posterity, an illiterate race, kept them locked up without any use of them, and concealed in the earth! One Apellion, a curious collector, purchased them; but finding the MSS. injured by age and moisture, conjecturally supplied their deficiencies. It is impossible to know how far Apellion has corrupted and obscured his text. But the evil did not end here: when Sylla, at the taking of Athens, brought them to Rome, he consigned them to the care of one Tyrannio, a grammarian, who employed scribes to copy them; he suffered them to pass through his hands without corrections, and took great freedoms with them. The words of Strabo are strong: 'Ibique Tyrannionem grammaticum iis usum atque (ut fama est) *intercidisse, aut invertisse.*' He gives it, indeed, as a report; but the fact seems confirmed by the state in which we find these works; Averroes declared that he read Aristotle forty times over before he succeeded in perfectly understanding him; he pretends he did at the one and fortieth time! and to prove this, has published five folios of commentary."

But, in respect to the present subject, even this is not the worst. "The works of the ancient pagans," observes the same writer,† "were frequently destroyed at the instigation of the monks. They were indefatigable in erasing the best works of the most eminent Greek and Latin authors, in order to transcribe their ridiculous lives of saints on the obliterated vellum. One of the books of Livy is in the Vatican, most painfully defaced by some pious father. But, inflamed with the blindest zeal against every thing pagan, Pope Gregory VII. ordered that the library of the Palatine Apollo, a treasury of literature formed by successive emperors, should be committed to the flames!"

If such complete destruction could be effected by bigot zeal at an early period, is it difficult to comprehend or to believe that similar industry should have been employed in more recent times in altering, suppressing, or adding particular passages, in conformity with the doctrines of the

* Vol. I. p. 31.

† Vol. I. p. 77.

church, or in support of papal infallibility? And will not this satisfactorily account for the existence of any passages if, indeed, any are to be found, which can be fairly so construed, seeming to infer a knowledge among the ancients of the doctrine of contagion in epidemic diseases? Livy is one of the authors sometimes referred to in justification of this inference by the modern partisans of this doctrine; and Aristotle has been expressly named by the College of Physicians of London as one of those authors in whose work proofs are to be found of a knowledge of the doctrine of contagion in epidemic diseases existing among the ancients. Here I am directly at issue with the College; and invite them, as they value the benefits which may be conferred upon society by the speedy decision of a question, involving so many important laws and regulations, deeply affecting human life and the prosperity of communities, that they would either condescend to a specification of particular proofs on this, as well as on all the other points of this extensive subject, or that they would have the magnanimity to acknowledge their error.

Plutarch not only does not assign contagion as a cause of the plague of Athens, but expressly assigns what he considers as its real causes: "With respect to the pestilence of Athens, the principal reproach is due to Pericles, who shut up in the town all the people of the country, which, by the *difference of place and manner of living*, produced a horrible *epidemic*." Pericles could not have fallen upon a better expedient, if his intention had been to produce an epidemic. It is worthy of remark, that Madame Dacier, in translating this passage, has rendered a horrible *epidemic* "une horrible *contagion*." This, no doubt, was an unconscious error of Madame Dacier, as I have elsewhere shown Gibbon to have unconsciously mistaken the meaning of Ammianus Marcellinus. But, besides the absurdity of employing the generic term *plague* to designate a particular pestilence, it has been quite common amongst medical translators, who, if they did not err wilfully, ought to have been more accurate, to render epidemic, pestilence, and plague, indiscriminately by the terms *contagion* and *infection*. Now, it is evident that none of these words can have any such signification: and, if epidemics, pestilences, or plagues, were as undoubtedly *contagious* as they are *not*, the translation would still be improper, false, and unjustifiable. When perpetrated with a view of cloaking delusion, in a matter of such vast importance to life, health, liberty, happiness, and prosperity, it is criminal in the extreme.

Diodorus Siculus, in stating what he considered to have

been the causes of the plague of Athens, mentions, amongst others, the absence of the Etesian or northern winds, which temper the air, but did not blow that summer.* He says nothing which, by the most forced interpretation, can be construed to refer to contagion.

Of the plague which prevailed at Constantinople in 543, and which, we are told, ravaged the earth for fifty-two years, Procopius concludes, that there was no other cause than the hand of God himself. Through his whole description, there is no idea resembling the modern doctrine of contagion to be found. Dr. Friend, the admirer of Mead, to whom he has dedicated his History of Physic, takes it for granted, that Procopius, notwithstanding his silence respecting that doctrine, must have believed in contagion, for the very excellent reason, that he states the plague of which he treats to have begun, or principally dwelt, as usual, in the sea-port towns. He entirely overlooks a circumstance of much greater weight on the opposite side, stated by Procopius, that, in the epidemic in question, no Physician was affected. I have elsewhere sufficiently explained why epidemics must be more frequent in sea-port towns.

Let us now inquire what evidence can be derived from the popular superstitions of the ancients; which we shall find to be alone conclusive against their possessing any knowledge of such a doctrine as that of contagion in epidemic diseases. The opinion of the Athenian people respecting the cause of the plague of Athens, in the time of Pericles, was, according to Diodorus Siculus, that so grievous a distemper was from the gods; whose wrath they attributed to the pollution of the Isle of Delos, by the burying in it of dead bodies; which they, therefore, caused to be removed, and sought to appease Apollo by various sacrifices.

Among the Romans, who were frequently afflicted with pestilences, it was customary, in order to ascertain their causes, to consult the Sibylline books. Upon a particular occasion, they were instructed, that, to put a stop to the pestilence, the god Esculapius should be brought to Rome from Epidaurus, a city of Peloponnesus, where he was worshipped under the figure of a serpent. An embassy was appointed for the purpose, and, after a whole year's expectation, the god at last arrived, to the great joy of the people: and the plague is *said* to have ceased soon after.†

It was also usual with the Romans, on occasions of great mortality, to observe a festival, which they called the "*Lecti-*

* Lib. XII. c. vii.

† Univ. Hist. XII. 135.

sternium." It is literally the spreading of a funeral banquet to the gods, in the ceremonies of heathen burial. Upon the occasion of a pestilence at Rome, in the year 396 before Christ, being soon after the plague of Athens, and in the time both of Hippocrates and Thucydides, feasts of this kind were given, which continued for eight days, being the usual duration of these sorts of festivals. During this period, every house was opened; every thing was in common; and all persons were well received, the stranger as well as the native, the unknown as well as the known. Even prisoners were released from confinement to partake of the festivity. And, notwithstanding this indiscriminate assemblage, the pestilence ceased shortly after the celebration of this festival.* It can scarcely be necessary to observe, that this practice would have argued perfect and universal insanity, on the part of the Romans, if they had known and believed the doctrine of contagion in epidemic diseases.

At another time that a pestilence made great havoc in the city of Rome and the adjacent country, it was found in the Sibylline books that great crimes had drawn down the wrath of Heaven upon the republic: a vestal was found guilty of incontinence, and *condemned to be buried alive*! †

In the year 261, the plague in Rome, for some time, swept off, it is said, five thousand persons a day. The books of the Sibyls were consulted; public processions ordained; and sacrifices offered to Jupiter, the author of health: but all to no purpose. ‡

In more recent times, among Christians, and especially in Roman Catholic countries, processions, prayers, exorcisms, and fastings, are the means which have usually been practised by the people to avert or to extinguish pestilence; and Diemerbroeck seriously affirms that they have proved successful: "*Quondam Marsiliæ deploratissimam pestem solis orationibus et jejuniis extinctam fuisse.*" § It is one of the numerous extravagances of the system of contagion, that its votaries should attribute authority to a man capable of giving credit to so abject a superstition.

The Mahomedans have also their superstitious modes of prevention and extirpation. During the pestilence of Aleppo, in 1762, according to Dr. Russell, § "the criers from the several minarets were ordered (by the cady) at each of the

* Rollin, Hist. Rom. Tom. II. pp. 388—391.

† Univ. Hist. XII. 158.

‡ De Peste, p. 78.

§ Ibid. XV. 435.

§ Treat. p. 49.

stated times of prayer, before the customary invitation, to chant *nine* times a certain verse from the Koran, which had, it seems, been discovered to be of sovereign efficacy against the plague."

The folly of these proceedings may excite ridicule or compassion. But they are, at least, harmless : whilst the measures of plague police emanating from the more degrading superstition of contagion, with all its other consequences, besides being infinitely more absurd, are, in all severe pestilences, the cause of probably nineteen twentieths of the whole sickness and mortality.

It now only remains to examine the testimony of the poets. And I may begin by observing, that, if a medical doctrine, which, had it been at all known or received, must have been notorious to all the world, is not to be found in the works of the physicians or historians, or even in the popular superstitions of a particular era, or any era preceding it, it could not have found its way into the writings of the poets of the same period but by magic or by miracle. If expressions actually conveying the idea of contagion in epidemic diseases are to be met with in the ancient poets, they must therefore be deemed to be the work of pure invention or interpolation ; and, although such adulteration be more difficult, and more easy of detection, in poetical than in prose compositions, yet it is by no means impossible. But I have not myself seen any words of this description ; and those which have been quoted by others, and made, by a forced interpretation, to signify contagion, do not appear to me to admit of being properly so interpreted, any more than epidemic, pestilence, or plague. "*Infecti quasi valetudine et contactu,*" is a mere manner of speaking, and does not, by any means, convey the idea of a person receiving a disease by means of a specific virus. "*Infected,*" among the ancients, had no reference to contagion, according to the modern idea, which was unknown to them. It meant simply affected, or metaphorically contaminated ; and applied here to *valetudine*, as well as to *contactu*. With just as much propriety might the expressions "*infecti quasi visu, quasi auditu, quasi curatione,*" be construed to mean, that a contagion literally was conveyed by the sight, by the hearing, or by attendance. I have elsewhere shown, that, in the "*contagium pecoris*" of Virgil, the former word was used metaphorically, the murrain of cattle not having been deemed by the ancients to be contagious ; for they do not appear to have had an idea of such a quality existing in any disease. As well, indeed, might the "*lucri contagia*" of Horace, or

the "*scelerum contagia*" of Lucretius, or the following line of Shakespeare :—

"Thine eyes, sweet lady, have infected mine!"

be supposed literally to mean the action of a contagious virus.

The terms "infection" and "infected" were, as I have observed, never used by the ancients in reference to the action of a specific virus, a matter with which they were wholly unacquainted. Neither did they annex such an idea to the word contagion. "The contagion of example," "the contagion of night," "the contagious darkness of the air," cannot surely be supposed to mean that example, night, or darkness, operate upon the mind by means of a specific virus. In modern times, the effects of sympathy have, I apprehend, been confounded, and sometimes, I suspect, purposely, with those of a supposed contagion. Epilepsy has been reported to have been produced by frequently looking at an epileptic patient during the paroxysms. Upon this ground, if the fact be true, the partisans of that doctrine would, no doubt, call epilepsy contagious. Its founder, Fracastorius, appears to have dexterously availed himself of the facility of confounding these two agencies, in his book "*De Sympathia et Antipathia, et de Contagione et Contagiosis Morbis*," which is undoubtedly the first work that treats *methodically* of the doctrine of contagion in epidemic diseases. Its fraudulent purpose I have elsewhere shown.

But the real opinions of the ancients upon this subject may, with certainty, be deduced from the uniform language of the poets respecting the causes of pestilence, as expressed in unequivocal terms in their respective works. I shall begin with Homer :—

"—— vapours blown by Auster's sultry breath,
Pregnant with plagues, and shedding seeds of death,
Beneath the rage of burning Sirius rise,
Choke the parch'd earth, and blacken all the skies."
Iliad, V. 1058.

Again,

"—— the red star, that from his flaming hair
Shakes down diseases, pestilence, and war."
Iliad, XIX. 412.

And,

"—— dreadful rises to the sight,
Through the thick gloom of some tempestuous night,
Orion's dog (the year when autumn weighs),
And o'er the feebler days exerts his rays ;

Terrific glory! for his burning breath
Taints the red airs with fevers, plagues, and death."

Iliad, XXII. 38.

That similar notions prevailed among the Romans, we learn from Virgil and Ovid:—

"——— Sirius from on high
With pestilential heats infects the sky."
Dryd. Virg.

"——— the threatening star
Of Sirius fills the air with dismal lights,
And anxious men with plague and famine frights."
Laud. Virg. H. 481.

"During the autumnal heats th' infection grew,
Tame cattle, and the beasts of nature, slew."
Dryd. Virg. Geor. III. 725.

"——— where she steers
Her baneful course, a mighty blast appears,
Mildews and blights; the meadows are defaced,
The fields, the flowers, and the whole year's laid waste.
On mortals next, and peopled towns she falls,
And breathes a burning plague within their walls."
Ovid. Met. II. 291, from Milton, II. 630, N.

Here we have the unequivocal testimony of the poets respecting the opinions which really did prevail amongst the Greeks and Romans concerning the cause of pestilence. They invariably connected them with certain seasons, the autumnal heats, the dog-star, &c.; but never with such an agency as contagion. It is curious, that, whilst some of the partisans of the doctrine of contagion persist in affirming that it was known to, and believed by the ancients, and that they even took precautions against its introduction and spreading, others of them admit that it was wholly unknown to the ancients, and treat as mere conceits those opinions transmitted by their poets, which I have just quoted, considering them scarcely worthy of notice, as "*being contrary to modern experience.*"* The value of "*modern experience*" upon this subject I have elsewhere had occasion to appreciate. Those who are of the latter opinion, of course, consider contagion in epidemic diseases as a modern *discovery*!

The only ground for believing that precautions were used by the ancients against diseases, supposed to be communicable by contagion, being introduced, or propagated, which I find cited by the most recent advocates of that doctrine, and

* City Remembrancer, Vol. I. p. 144. London, 1769. Collected from papers originally compiled by Dr. Harvey, Physician to the Tower.

with which I had myself furnished them, is by far too amusing to be passed over wholly without notice. Apprehending that the celebrated historian, Gibbon, had unconsciously misrepresented the meaning of Ammianus Marcellinus, where he makes him attribute to the Romans of his days a belief in contagion, I searched several editions of that writer, and was able to find only one paragraph, and that paragraph varying in different editions, which, by possibility, could have given rise to the mistake. It is distinctly and avowedly a satire on certain fops at Rome, for causing their servants to use the bath, before their return home, after having been to inquire for sick persons labouring under diseases attended with sores, or ulcers, or spots.

A writer in the Quarterly Journal of Science and the Arts, who is evidently endeavouring to answer, without naming, my work, quotes this very paragraph, and ridiculously enough infers that those practices with respect to diseases, which were not named, and which the author was clearly satirizing, were *regular* precautions, used *generally*, against *epidemic* diseases. I shall allow this writer the credit of refuting himself. "Instead, then, of having any doubts," he concludes, "on the opinions of the ancients respecting the propagation of disease by contagion and infection, we have *ample* proof from the writings of their philosophers, physicians, and poets, not only of the existence of such an opinion, but of *precautions taken to prevent the spreading of infection.*" In the very next sentence, we find the "ample proof from the writings of the philosophers, physicians, and poets," to consist, not of any intimation whatever respecting the doctrine of contagion in epidemic diseases, or of any precautions to prevent the spreading of such a contagion, but simply of the satirical remarks of Ammianus Marcellinus respecting the practice I have mentioned, with regard to certain diseases which he has not named. "In the reading, however, which I have gone through," continues this writer, "I do not recollect to have met with a passage describing any *strictly precautionary means*, except in Ammianus Marcellinus." Here he assumes, without the slightest foundation, that the diseases alluded to by the Roman satirist were epidemics; whereas they are obviously of a very different description. In another place, where the ancient writer expressly treats of an epidemic which raged at Armida, in Mesopotamia, A. D. 359, he does not, amongst the causes which he enumerates, speak of contagion, * — a silence which seems greatly to puzzle our commentator. Infection, I must repeat, was never used by the

* Ch. iv. book ix.

ancients as synonymous or connected with contagion. Nor is it credible, that, if it had been against this latter quality that the Roman fops, satirized by Ammianus Marcellinus, had been taking precautions, they would have been satisfied with merely causing their servants to perform ablution before their return home. If a person had caught the small-pox, or any other really contagious disorder, does any one imagine that the simple act of bathing would either remove it or prevent his infecting others?

Even during the crusades, in the eleventh and twelfth centuries, when the free states of Italy were at once in communication with the nations of the Levant and with those of the north of Europe, it is not recorded that any apprehensions were entertained of pestilence being propagated by means of contagion, nor that any measures of precaution were adopted, by any nation, to prevent such a catastrophe. In 1098, the crusaders besieged in Antioch experienced a great famine and pestilence; as did the army of the crusaders before Damietta, in 1218, in the reign of the Sultan Seifeddin. But no one dreamt of imputing these maladies to a specific contagion. In the time of John Paleologus, the city of Venice was greatly afflicted with a pestilence. General processions were made, and prayers said at the saints' altars, which were in the streets. In the six quarters of the city, six boats were appointed to convey those who were affected to a lazaretto two miles distant. But no precautions are mentioned as being adopted for preventing the spreading of the disease by contact. Lazarettos were then unquestionably nothing more than hospitals, or places for the reception and treatment of the sick; and not places for the purification of goods and the reception of passengers, according to the practice of the present day.

I am aware, that, in the thirteenth and fourteenth centuries, the knowledge of diseases actually propagated by contagion did prevail in Europe, as small-pox and *lues venerea*: and it is reasonable enough to suppose, that, amongst fanatics or ignorant persons, such ideas might be extended to other diseases, where there was no foundation for it, but merely because they could not devine their real cause; and because the matter was thus settled at once without the trouble of reasoning. That such an analogy was never applied by Physicians to epidemic diseases, until the period of the council of Trent, is certain, unless we choose to consider the Tales of Boccaccio as a serious history. Even as late as 1500 and 1513, we do not meet with any traces of precautions against the spreading of contagion having been adopted during the pestilences which afflicted London in these years. Dr. Patrick

Russell, a strenuous advocate for the antiquity of the doctrine of contagion in epidemic diseases, without being able to assign any grounds for such a belief, apparently aware of how much this fact made against him, endeavours to account for the omission of precautions, in the early epidemics of London, by alleging, that "the Physicians had not as yet been incorporated."* Here he falls at once into an error and an absurdity. In the first place, it is not true that the Physicians were not incorporated previous to the pestilence of 1513. The College was established in 1506. And, in the second place, if it had been true, it would not be the less absurd to impute to that circumstance the non-adoption of precautions; since, as the same individuals who afterwards composed the chiefs of the College must have been, in 1500 and 1513, the advisers of the government in matters relating to health, they would not have failed, if the doctrine of contagion in epidemic diseases had prevailed among them, to have recommended corresponding precautions. The mere circumstance of incorporation could not have effected in the individual members a miraculous and total change of conduct and belief.

The first pretended mention of contagion in pestilential diseases in England is stated to be in an act of Henry VIII., dated in 1540, by which barbers in London are prohibited from using surgery, and surgeons from using barbery; and the reason assigned is, "that persons using surgery often take into their cures and houses such sick and diseased persons as have been infected with the pestilence, great pox, and such other contagious infirmities—do use or exercise barbery, as washing or shaving, or other feats thereunto belonging, which is very perilous for infecting the king's liege people, resorting to their shops or houses, there being washed or shaven." Now, it is to be recollected that the votes of the House of Commons were not printed until 1681;† and how easy it must have been, following the doctrines of contagion then prevailing, to insert the word "pestilence" in addition to the original text, perhaps even under an orthodox persuasion that it had been an omission in the manuscript act. *Prima facie*, it does not appear very probable, that, in a public act of the legislature, pestilence would have been thus mixed up with *lues venerea* as a matter of surgery. But the matter is not worthy of farther research: if the allegation were correct, it would not prove the truth of the doctrine; it would only

* Treat. of the Plague, p. 478, Note.

† Anderson's Com. Vol. II. p. 553.

show its existence in a partial and unaccredited state, before it was rendered general and current by papal authority.

In the same manner, we are told that certain unfortunate heretics were burnt at Toulouse, between the years 1530 and 1542, on a charge of having propagated pestilence by rubbing staircase bannisters with plasters impregnated with the matter of pestilential buboes.* Whether this narrative be true or not, is of no manner of consequence to my argument. If such cruelty were really perpetrated, it is only another instance of the readiness with which bigotry avails itself of every species of popular delusion, to destroy, under the pretence of benefit to the public, those individuals whom priestcraft hates or fears: if it were not perpetrated, we may still naturally account for the propagation of the story, at a subsequent period, *in terrorem* to those who might wish to dispute the papal doctrine of contagion in epidemic diseases. The real origin of this doctrine, in its accredited form, is traced, at some length, in my "Results of an Investigation respecting Epidemic and Pestilential Diseases, including Researches in the Levant concerning the Plague," which supersedes the necessity of restating it here; the more especially, as, of the numerous criticisms which have appeared of that work, no one that I have yet seen has attempted to disprove the origin which I have there assigned to that pernicious imposture.

II.

Case of Empyema treated successfully. By JOHN BETTY, Member of the Royal College of Surgeons, London, and of the Medical Society, Aberdeen.

MR. R. KEENER, junior, of this parish, ætat. twenty-five, a strong athletic young man, had, previous to the date of his present illness, March 15th, 1821, enjoyed an uninterrupted state of health. Being requested to visit him on the 16th, I found his symptoms were those of a severe attack of pneumonia. These symptoms, however, appeared to yield to large depletions; and a strict adherence to the antiphlogistic plan, much more readily than the severity of the attack, in a strong muscular man, would induce one to prognosticate. On the fourth day he was convalescent, and on the fifth was permitted to quit his bed-room. It was soon evident that he was scarcely equal to the requisite exertion, though he did

* Arrêts Notables du Parlement de Toulouse. Par Laroche Flavin. Lib. iii. tit. 7. — Lafaille, Annales de Toulouse, sur l'année 1542.

not complain of any sensation of syncope. He soon retired to his couch; and the attempt was repeated on the subsequent day with a still smaller share of success. As he continued tolerably easy when in bed, no alarm was generated in the minds of his friends; and I was not again called to him till the 22d. He now complained of a troublesome dry cough, an obtuse pain in the right side of the chest, and an uneasy sensation when lying on the left. His tongue was clean, appetite good, and pulse regular. His bowels were very costive, and required unusually large doses of the most active purgatives, combined with enemas, to produce an adequate effect. The cough gradually increased in violence, and, after a few days, was accompanied with an expectoration of a greenish mucus, similar to that which is secreted by the internal membrane of the bronchiæ when in a state of irritation. His breathing remained perfectly free either in an erect or a recumbent position, except occasionally, when attacked with distinct paroxysms of apparent suffocation. When those paroxysms approached, he required to be instantly raised in bed; and during their continuance, which was usually some minutes, he appeared much agitated. During the intervals of those attacks, he lay either on his back or right side, without any elevation of his head or chest; but the sensation experienced when an attempt was made to lie on the left side, at length amounted to that of immediate suffocation. A considerable fulness became gradually more and more apparent in the epigastric and right hypochondriac region; the heart pulsated about three inches lower down, and much nearer the angle of the ribs than its natural situation; and the whole of the right side was unusually prominent. These symptoms could not be easily misunderstood. No doubt could exist as to there being some effusion in the right side of the chest; still every attempt to discover it by the ordinary tests were futile. No fluctuation was perceptible in any situation, nor was the sound of fluid audible on agitating the body. The symptoms daily increased in violence; and about five weeks from the commencement of his illness, a prominence was perceptible between the clavicle and first rib, just over the course of the right subclavian artery, immediately after branching off from its parent trunk, the arteria innominata. Not the slightest symptom of fluid in any other part could be detected by the most cautious external scrutiny; and there was daily such a fearful aggravation of alarming symptoms, that I determined on giving him what relief paracentesis would afford, for which the patient and his friends most anxiously pleaded. The fluctuation in the situation described was very perceptible, and on requesting

the patient to cough, while the fingers were applied to the prominence, the impetus was very strongly felt.

April 24th, being provided with what might be requisite, I began the operation, by dividing the integuments over the middle of the prominence, in a line parallel with the first rib, to the extent of an inch, and having laid bare the pleura, made an opening through it with a lancet. A considerable gush of matter immediately succeeded, perfectly inodorous, of an uniform consistence, without any flakes of coagulable lymph, and of a pale straw colour. I now introduced a canula, about an inch long, furnished with a plug, to prevent the matter from always flowing, and having two eyes near its orifice, similar to those fixed to a catheter, through which was introduced a piece of tape, which was fastened round the chest, and prevented the removal of the canula from its proper situation. I occasionally stopt the current for a few minutes, to avoid producing syncope, and, in the course of two hours, the quantity caught amounted to nine pints. Previous to the introduction of the canula, I endeavoured, with a bougie, to ascertain the direction of the abscess. Perpendicularly downwards it would only pass about three inches; but by pursuing a course obliquely toward the mediastinum, and then downward toward the diaphragm, it was readily introduced its whole length. About two pints, on an average, passed through the canula, in twenty-four hours, for some time.

The patient's feelings, immediately after the operation, may be much more easily conjectured than expressed. All his distressing symptoms immediately left him, and his nights were now undisturbed. After about ten days, the quantity of matter gradually diminished; no night sweats, nor any other symptom of hectic, intervened; and during three weeks, our hopes of a speedy recovery were extremely sanguine. About this time, however, his mother (who watched over him with the most anxious solicitude) informed me, that she feared, from a partial return of the original symptoms, that some latent mischief lurked behind. The cough, nocturnal paroxysms of suffocation, and pain in the side, which now daily increased in violence, were but too decisive marks of internal mischief. No fluctuation, however, could be any where detected, either by myself or Mr. Radford (a most respectable and experienced Surgeon of Chulmleigh, who now met me in consultation); and as the quantity discharged was now very trifling, it was evident that some new formation had taken place. It was agreed, that all that could be done, under present circumstances, was carefully to endeavour to

discover the seat of the new abscess, and to give it vent whenever, and wherever, it might present itself.

The situation of the patient became daily more critical; and on the 24th of May, a fluctuation was obvious between the third and fourth ribs, near their angle. We perfectly agreed in the necessity of an immediate operation, and an opening was made into the chest in the situation pointed out by nature. Some of the fibres of the pectoralis major were necessarily divided, and instead of using the lancet, I now finished the operation with the scalpel. About five pints of fluid were now evacuated, very dissimilar to that from the superior abscess, being of a dark brown colour, highly foetid, and having a considerable quantity of coagulated lymph floating in it. This abscess took a direction backward, and then downward, and a canula was introduced, similar to the one before described. A remission of all the alarming symptoms was again the result, and hope once more pointed to a speedy convalescence. I now for a moment withdrew the first canula, and endeavoured, with a silver catheter, to force a communication between the two abscesses; but though some part of the adhesions gave way, no direct communication could then be formed. A circumstance occurred, about this time, which I think worthy of notice, and which I shall advert to more particularly hereafter. In reaching forward to take something from the ground, a sensation of irritation in the trachea occasioned a slight cough, with which he brought up about an ounce of matter exactly similar to that discharged from the first abscess. This he repeated several times during that day, by having recourse to the same posture, but each time the quantity was diminished, and he could never accomplish it at any subsequent period. The first opening soon after this closed, in consequence of the canula being withdrawn for too long a period; hopes were, however, entertained that the small quantity remaining would be absorbed. The discharge from the lower abscess was now fast diminishing; but there was soon a slight return of the cough, &c. sufficient to occasion alarm. Nor did the cause long remain concealed; — it was too soon evident, from a prominence being again observable in its first situation, accompanied with a fluctuation, that the sac of the first abscess was again filling — but Nature now became her own operator. While making an exertion to expel the last drop from the lower abscess, by a deep inspiration, something appeared to give way internally, which was audible to those around, and an immediate gush of matter, exactly resembling that from the superior abscess, to the amount of a pint and a half, took

place. If any doubt could be felt as to where this discharge came from, the immediate subsidence of the prominence between the clavicle and first rib would decide. It is scarcely necessary to observe, that the patient was instantly relieved from all his painful and distressing symptoms. He was now soon equal to walking out; and finding the canula rather troublesome, contrary to the advice I gave him and the warning he had received, he withdrew it prematurely. The consequence was, that the second, like the first, abscess began to fill a second time; and as no possibility existed of the fluid being removed, except by giving it vent, I operated again nearly in the situation of the former opening, and about a quart of matter was again discharged. No premature removal of the canula again retarded his convalescence; and in about a fortnight, nothing remaining to be discharged, the opening was permitted to heal. A considerable œdema of the lower extremities continued for some weeks, but gradually subsided as health and vigour returned. The right side now returned to its natural appearance, but a considerable concavity still remains between the clavicle and first rib, which are nearer approximated than natural. He now enjoys a perfect state of health, though he complains of being unequal to his former athletic exertions.

I have purposely avoided interrupting the history of the case with any particular notice of the medical treatment. It will merely be necessary to state, that anodynes and the ordinary pectoral mixtures had no influence whatever in allaying the violence of the cough. The cortex and the metallic tonics were administered during the latter stages of the complaint. The period occupied by the discharge was about nine weeks, and during that time the quantity actually caught amounted to fifty-eight pints, or seven gallons and a half, exclusive of what was wasted.

Observations.—1. This case appears to differ materially from the ordinary cases of empyema. It usually happens that a chronic inflammation of the pleura takes place, and an effusion of serum into its cavity is the consequence; but in this instance we have acute inflammation of the lungs which extends to the pleura; coagulable lymph is thrown out, which becomes organized, and thus adhesions are formed; the inflammation in another part of the pleura terminates in suppuration, and thus an encysted abscess is also formed. These appear to be the most prominent peculiarities in the case.

2. The obtuse pain in the right side, the strong disinclination to exertion, the increase of cough while the pulse betrayed no inflammatory affection whatever, the violent paroxysms of anxiety and apparent suffocation, and the total

disability to lie on the left side, were the principal diagnostic symptoms. The favourable state of the general health, and the absence of every appearance of hectic, were sufficient to prove that no organic affection of the lungs existed.

3. I am perfectly aware, that in ordinary cases of *empyema*, where the serum floats loose in the bag of the pleura, the patient may live for years without experiencing any other inconvenience than that arising from mechanical pressure on the lungs, and that the whole of this fluid may be at length evacuated by paracentesis, without ulceration of any of the compressed viscera being produced, as in the ordinary cases of ascites. Dr. Archer, in the second volume of the *Transactions of King's and Queen's College, Dublin*, has lately published a case, in which he performed the operation more than three years after the effusion is supposed to have taken place, with perfect success; but even in this case, the Doctor observes, that the canula was several times obstructed by some portions of organized matter, which, on examination, were found to be pieces of the bronchial tubes, in a shrivelled decayed state. Admitting this to be correct, it would appear that the pressure even in this case, where the fluid was not encysted, was sufficient to cause disease in the compressed tubes. This may probably tend to elucidate the circumstance mentioned in the preceding history (and to which I promised again to advert), of part of the contents of the superior abscess being discharged by the mouth in a certain position of the body. The encysted nature of the abscess must naturally confine the pressure to one particular point; at least, it must be greatest at one part; and as the patient lay almost entirely on his back, it must be evident, on considering the direction of the superior abscess, that the onus must rest principally on the tubes of the right bronchia: absorption and ulceration would thus be induced, and though this process must have been materially diminished both in activity and extent by the first operation, still a small spot may be readily supposed to have been too far advanced to recede, and thus a small opening must be the natural consequence, through which any quantity of matter remaining, however small, would find its way, in a stooping posture, and, creating irritation, occasion an immediate exertion for its removal. The correctness of this reasoning being admitted, does it not render it probable, that those cases of sudden death, so frequently recorded, and which are said to be occasioned by something bursting internally, are, in fact, cases of encysted abscess of the pleura producing ulceration of the bronchia; and is it not more than probable, that a short period (probably a few hours) would have added this case to their

number, had the operation been delayed? I am strongly supported in this opinion, not only by the case related, but by one briefly noticed by Mr. Samuel Cooper, in (that excellent practical work) his *Surgical Dictionary*. A patient was admitted into Bartholomew's Hospital, with disordered respiration, &c.; and one very striking feature, which ought to have led to a timely detection of the nature of the complaint, was, that the heart pulsated on the right side of the sternum, though it originally occupied its natural situation. On dissection after death, a very large collection of fluid was found in the left bag of the pleura.

4. We are told in systematic surgical works, where the rules laid down for operating, instead of being deduced from actual experience in the operating theatre, are but too often the offspring of a fireside theory, — that paracentesis thoracis ought to be performed between the fifth and sixth, or, as Mr. J. Bell says, between the seventh and eighth ribs. Where there are no adhesions, where the fluid on agitating the body can be distinctly heard, and where it is optional with the Surgeon whether he will operate in the superior or inferior part of the chest — the most depending situation would, of course, be preferred; but had this rule been adhered to in the preceding case, I will not pretend to predict what disastrous consequences would have followed; but one thing is certain, that the Surgeon would have had the mortification of operating, and the patient the misery of suffering, in vain. A grand difference exists between the nature of an abscess in the thorax and in any other part of the body. In proportion as the lungs acquire their natural power of expansion, and of filling the chest, all fluid, if there is a sufficient external opening, must be forced out, whatever situation it may occupy. From Larrey's cases, it appears, that even when the lung is wounded, and, consequently, like a perforated bladder, totally incapable of being inflated, all fluid may be extracted by the repeated application of a cupping-glass; and so completely in one instance did the glass perform its duty, that a portion of the lung was actually drawn out through the wound, a tolerably certain criterion of that side of the chest being most completely unloaded of its effused fluid.

I have endeavoured to bring forward the principal features of a case which I thought worthy of notice, not from its singularity, but because I believe it to be of much more frequent occurrence than is generally imagined, and which has been terminated successfully, by an operation so rarely, though yet so easily performed, and by which, if more frequently had recourse to, I am persuaded many valuable lives might be annually preserved to society.

Hatherleigh, Devonshire, January 7th, 1823.

III.

Account of the Yellow Fever which appeared, in an Epidemic form, in Bermuda, during 1819; and of the Method of Treatment adopted. By RICHARD JONES, Esq., late Surgeon of the Naval Hospital of that place.

THE epidemic which appeared in Bermuda, during 1819, assumed the character of the bilious, West India, or yellow fever. It first manifested itself by attacking the inhabitants of the town of St. George; becoming, however, almost simultaneously and extensively prevalent among the troops in the garrison of that town, and eventually extending its baneful influence to all parts of the country. The earliest cases appeared within the first week in August, and by the middle of that month disease was very rife, attended with an unusual degree of mortality. Its ravages, however, were chiefly in operation among strangers, seafaring men, and temporary residents in the colony.

Opinions are divided respecting the source of this fever. The advocates of contagion support the assumption of its having been imported, and the colonial legislature appear inclined to take this view of the matter, by proposing henceforth to adopt more rigid quarantine restrictions: at the same time, men, under different impressions, find sufficient causes to account for its native origin, as being a disease occasionally indigenous in all countries subject to the same high range of temperature as that under which we live during the greater part of the year. From the locality of Bermuda, situated as it is in the very centre of those ports where the worst cases of yellow fever are known to occur, and forming, by commercial regulations, an entrepôt between the United States and the British West India islands, there can be little doubt but that vessels engaged in such service will often arrive in our ports with fever on board: if, therefore, any hypothesis is to be founded on this admission, it may be easily assumed, for I believe that a summer seldom passes without many such cases occurring, but I have never known an epidemic prevalence of fever to result from such a circumstance; but, on the contrary, I recollect many cases in point tending to confirm me in the belief that it is not propagated by the contagion of incidental subjects of fever arriving from foreign ports.

Soon after the commencement of this fever, but while it was entirely confined to St. George's, at the distance of the whole extent of the country from the naval departments, his Majesty's ship *Euryalus* arrived from the West Indies, for

the purpose of refitting at our dock-yard during the hurricane months; her crew were at that time in as high a state of health as will be met with in any ship on the healthiest station; for, with the exception of two chronic cases, which were afterwards sent to the hospital, she had not a man on her sick list, although she had been ten months in the West Indies without experiencing what has been called the seasoning sickness; so that if we are justified in considering the visitation of fever which she subsequently experienced here in that light, it may serve to establish the superior salubrity of the air and climate of Bermuda to that of any of the West India islands, where, under such a visitation, there can be little doubt but the extent and ravages of disease would have been greatly augmented; neither do I consider that, under existing circumstances, she could have remained stationary, for twelve weeks, in any West India port, at the same season of the year, without suffering in a much greater proportion than she did here in that space of time; for although some very severe cases of fever did certainly occur on board, yet there was nothing like the agency of contagion manifested in them: the partial manner under which disease operated would furnish a strong point in favour of its non-contagious nature, were such support wanting. While the *Euryalus* remained at Bermuda, twenty-seven of her people were sent to the hospital. Twenty of these were genuine cases of fever; two were cholera morbus, the remainder being unimportant cases. The extent of mortality amounted to seven, — six having died of fever, and one of cholera morbus. The *Euryalus* being one of the West India ships, I have thought it right to state these particulars, to show that the existence of fever was fully developed before the arrival of that ship, and that her crew at that time were not only exempt from sickness, but enjoying an unusually high state of health; from which I think it may be deduced, that as the *Euryalus* cannot fall under the suspicion of having brought disease to our shores, neither can the degree of fever that subsequently occurred among her crew while in our port be referred or attributed to any specific or deleterious source encountered here, but may be considered as incidental cases depending on latent predisposition to fever imbibed elsewhere, and only requiring some strong exciting cause to bring it into action.

Respecting the difference of opinion among medical men on the question of local origin, or imported contagion of fever, in similar instances, ample discussions have already been disseminated to little effect; I will therefore proceed to enumerate some of the most marked and leading features by

which the presence of this too fatal malady was ascertained. It generally commenced with a slight chilliness, frequently referred to the neck, or between the shoulders, extending, with sensations of shivering, along the course of the spine; sometimes these sensations were preceded, in other cases followed, by faintness and nausea, or by vomiting. The pulse at this period afforded very little information; it was often small, and variable in point of frequency. The eyes had a dull heavy appearance; the countenance was shrunk, with an expression of extreme anxiety.

Soon, however, these symptoms were followed by a burning hot skin, intense headach, particularly over the orbits, with highly increased vascular action, indicated by the throbbing of the carotid and temporal arteries, and by the state of the pulse, which was not now less than 110 or upwards in a minute. The eye now assumed a fiery red appearance, with great intolerance of light. Perspiration was common at this stage of the disease, but without sensibly diminishing the preternatural heat, or in any way yielding commensurate relief; while pains in the back, head, and legs, were much complained of. The tongue was sometimes moist, and covered with a white fur; in other cases, it was dry from the commencement, and, in the worst cases, commonly marked with a raised, rough streak in the centre, of a reddish brown hue. The bowels were generally constipated, and the torpor was sometimes so considerable as to frustrate all our endeavours to relieve the system by purgatives so efficiently as it was of paramount importance to do. Thus the first stage of the disease was marked by the development of inordinately high excitement, and which, if not cut short at an early period by vascular and other depletions, ran on in one continued paroxysm, no obvious crisis having taken place, in the worst and fatal cases, until at length the excitement was exhausted by its own violence; nor was there any destined or discernible remission even at this period beyond the deceitful calm between the preceding excitement and approaching collapse.

The symptoms that next manifested themselves were a painful distention of the epigastrium, a burning sensation in the stomach and along the œsophagus, attended with thirst and extreme restlessness. The vascularity of the tunica conjunctiva was succeeded by a muddy appearance, followed by the yellow or icterious suffusion characteristic of the disease, in which the face, neck, and breast, also participated. The perspiration which appeared in the earlier stage had now vanished. The tongue was dry, hard, and rough; and the vomiting incessant, the ejected matter having gradually become black. Towards the latter end of this second

stage, in many cases, hæmorrhagy took place from the nose, gums, lips, and fauces;—so attenuated was the blood in this stage of putrescency. The kidneys sometimes ceased to perform their office, no urine having been secreted at this time. Under these unpromising and hopeless appearances, the second stage of this dreadful disease terminated, leaving the patient in the third stage under many of the precursory symptoms of death—in fact, he was moribund, the pulsation having been lost at the wrist sometimes for hours before dissolution. There was now hiccup, subsultus tendinum—black vomit—exudation of blood from the villous surfaces—cadaverous smell—profuse perspirations—cold extremities—accumulated warmth about the præcordia—death.

Having taken this cursory view of the symptoms and appearances exhibited, I will now endeavour as briefly to relate the method of treatment that was pursued in combating this formidable disease.

If the patient were admitted into the hospital while the primary symptoms of chilliness, oppression, and constriction, were present, it was customary to give a purgative, composed of eight grains of calomel, fifteen of pulv. jalapæ, and four of pulv. jacobii, in the form of pills, waiting for the accession of increased action, which soon arose, with some or all of the concomitant symptoms already described. This is the time I have thought most favourable to venesection, and have usually abstracted from thirty to forty ounces of blood from the arm, according to the strength of the patient, or violence of the disease. Syncope sometimes ensued in this first operation, and, whether it did or not, a copious diaphoresis most commonly followed, and the patient was directed to indulge in the use of proper diluents. At the expiration of five or six hours, the mercurial antimonial purgative was repeated, unless (which very rarely happened) complete effect had been produced by the first dose. At the end of twelve hours the perspiration generally became partial, the intense headach, with the sensation of forcible stricture across the orbits, having remained unabated. If the preternatural heat and excitement continued inordinately high, a second abstraction of blood was made by opening the temporal artery, and taking to the extent of thirty ounces, which was usually followed by relief, perspiration having again succeeded to that operation. As auxiliaries to the purgative intention of the pills, laxative enemata were generally prescribed. Cold wet cloths were also applied to the forehead and temples. It was also the common practice to sponge the body with vinegar and water, either warm or cold, according to circum-

stances, while morbid heat existed, in the absence of perspiration.

The alterative antimonial purge was continued every sixth hour until the primæ viæ were satisfactorily evacuated. Further vascular depletion was frequently found necessary, so that a third bleeding was sometimes resorted to within twenty-four hours after admission; and, in some few instances, a fourth bleeding was ventured on at a later period. The greatest extent to which this depletory plan has ever been carried at this hospital was to the amount of a hundred ounces; but in no instance did it exceed that quantity.

Effervescing draughts, or saline febrifuge medicines, were occasionally given when their exhibition did not interfere with the operation of more powerful remedies. When the state of the primæ viæ admitted of discontinuing the purging pills, calomel was, nevertheless, still continued, in the proportion of three grains every third hour, combined with a few grains of the pulv. contrayervæ compositus.

In those cases that yielded to these active measures, the early use of columbo was considered beneficial, either in substance or infusion, according to the capability of the stomach to bear it. The bark was also tried, in various forms, without having waited, at all times, for the subduction of excitement. Unfortunately, however, the unconquerably irritable state of the stomach too often obliged us to discontinue these remedies, whatever efficacy we might have been inclined to ascribe to them. In this state of the stomach, in some cases, small doses of calomel, conjoined with one-third or half a grain of powdered opium, were given, and found to moderate the urgency of the symptoms and, in some instances, to render permanent benefit. At this period weak brandy and water was recommended, and was sometimes retained in the stomach. This was also the period for blisters, but they were found here to harass the patient, and render him still more distressingly irritable; on that account they never came into general use: they were, however, considered to be beneficial when applied to the temples or occiput, and to occasion but little inconvenience if employed in these situations.

It would be difficult to describe with minuteness the various remedies resorted to for the relief of particular symptoms in the latter stages. They were, of course, varied and adapted to particular circumstances. The carbonate of ammonia was spoken highly of, but I have never known it afford more than temporary relief. It usually supported and

raised the sinking pulse for a short interval, but I have never known it succeed in effecting more than this.

During the prevalence of this endemic, one hundred and seven of the worst cases were received into the Naval Hospital; of which twenty-five died. Within the same period, one hundred and one cases occurred among the inhabitants of the dock-yard, of which number seven have died; thus making the total number of fever cases in the naval departments under my care to be two hundred and eight:—of deaths, thirty-two—the proportion being as two in thirteen.

As it may be expected that I should attempt to account for the occurrence of fever in the autumn of 1818 and 1819, I shall submit it as my opinion, that it originated entirely from endemial causes, and that, whenever it has appeared in Bermuda, it has been generated where it prevailed; bearing in mind, that the morbid influence or principle is more generally operative upon new comers, Europeans, or strangers, whose constitutions are unassimilated to the climate; besides, the greater part of such people are necessarily exposed to some of the most powerfully exciting causes of fever; and their own intemperance and imprudence subject them still farther. Thus the burden of disease and mortality falls upon the labouring classes of people who arrive here full of activity and energy, and pursue the fatiguing avocations of common labourers with indefatigable assiduity: moreover, whenever new and extensive works are in progress in a tropical climate, and new soil and surfaces exposed to the action of the sun's rays, deleterious miasmata will be generated (notwithstanding the absence of marshes), sufficient, perhaps, in itself to account for the local origin of fever; but when other powerful causes, hereafter to be noticed, are at the same time encountered, it is probable that a fever of a highly aggravated type will be engendered. The degree of heat which people in the naval works are frequently exposed to may appear incredible; as, for instance, when employed in cutting stone, or excavating canals, or other common out-door work, the thermometer will be found to rise as high as 120° of Fahrenheit's scale, when placed on the soil, or in situations subject to the sun's influence. In this deleterious temperature, young, healthy, unassimilated Europeans are farther enduring the additional excitement of hard labour; the consequent exhaustion will necessarily oblige them to resort to the artificial stimuli of spirituous drinks, which they have every facility in this country of indulging in to excess. So that if we draw a comparison between the constitutions, habits, and occupations of the people employed in government departments with those of the other white inhabitants generally, the contrast

will appear strikingly different, and may serve to account for the comparative immunity of the latter in those seasons of sickness. To say that their constitutions are assimilated to the climate in which they live, may seem superfluous; but it is a circumstance which enables them to resist with impunity that degree of noxious influence that would be sufficient to produce disease in a new comer: besides, the white population here perform none of the manual labour of the country; at the same time, they are extremely temperate in their habits, making use of but little animal food, and by no means addicted to the free use of spirituous liquors.

If I have succeeded in proving a difference in the temperament and constitutions of the native residents of the country, on the principle of assimilation to climate, strict temperance, and non-exposure to heat, moisture, and fatigue, surely it may serve to account for their exemption from a fever which I consider as purely incidental to a description of persons under diametrically opposite circumstances, who, on their first arrival here, are necessarily subjected and exposed, from the very nature of their duty and engagements, to a concatenation of exciting causes that have already been enumerated and dwelt upon; causes which I consider so strong and so striking, as to leave no doubt on my mind of the local origin of the disease in question.

I ought to observe, that at the time of the very acme of this fever (17th September), a reinforcement of forty men arrived here in a transport, and were landed at the dock-yard after a passage of eight weeks from Plymouth. I had reason to apprehend these men would be more than commonly obnoxious to the cause of the disease, and this anticipation was fully realized, as some of the worst and most intractable cases occurred from amongst them. Finally, I may mention, that this is the third time I have witnessed the prevalence of endemial yellow fever at Bermuda, viz. in the autumn of 1812, again in the autumn of last year, and in the present; but in neither instance did I ever suspect its foreign introduction, or contagious nature, when within the walls of our spacious and well-constructed hospital. The circumstances attending its endemial prevalence in 1812 are peculiarly in consonance with the views and opinions I have herein set forth. It was in the first year of the formation of a dock-yard, when the necessity of exertion, exposure, and fatigue, at the commencement of so great an undertaking, was unavoidable.

IV.

Case of Anasarca in which Acupuncturation was successfully employed, and the Fluid discharged by it. By FREDERIC FINCH, Greenwich, Fellow of the Royal College of Surgeons, London.

[Communicated by Dr. SUTTON.]

HAVING, in the course of the last month, resorted to acupuncturation, with manifest advantage, in a case of fixed pain in the lumbar region, I am therefore persuaded that it is a means of relief which deserves to be extensively known and generally adopted, as it effects its purpose in the most easy manner, and, should it fail, is productive of little or no inconvenience or uneasiness to the patient. The Profession must ever feel much indebted to Mr. Churchill for bringing this ingenious and valuable practice into notice. It is, however, with reference to another application of the needles that I address this communication.

I have, with Dr. Sutton, of this place, been attending a patient with very considerable anasarca of the lower extremities and abdomen, attended with symptoms of hydrothorax. The Doctor felt inclined to discharge the fluid from the extremities by punctures of the lancet, but was led to defer it on account of the unpleasant circumstances which are frequently occasioned by that operation. It occurred to him that acupuncturation might be tried with much greater safety. This suggestion was adopted, and I had the satisfaction to find that the practice was followed by none of the bad consequences which almost invariably supervene to the former method. After the water had oozed from the minute punctures for a day or two, they closed in such a manner as to leave no vestige of their having existed. It is most true that a very small portion of fluid will escape through any one puncture, but the number of them may be multiplied to any amount; and as this is done without exciting pain to the patient, the anasarcaous limb may be very expeditiously reduced. Of the number of punctures made in the case just alluded to, not one assumed even the appearance of inflammation; and the reduction of the size of the limbs was happily accomplished without any sort of inconvenience, thus clearly pointing out a most efficacious and safe method of evacuating such collections of fluid.

It does not appear unreasonable to anticipate that acupuncturation may be employed in various ways in surgery with advantage. Might it not, for instance, be used to ascer-

tain, in some measure, the nature of certain tumours — if the contents should be fluid — the depth of the lodged fluid — the resistance to be expected to take place in opening the tumour, and many other particulars often of the utmost importance to the Surgeon?

Greenwich, February 4, 1823.

V.

Singular Case of Rupture of the Uterus and Intestinum Rectum, followed by Parturition through the Anus. Communicated by WILLIAM GAITSKELL, Esq., Member of the Royal College of Surgeons, London.

FOR this very interesting and unparalleled instance of delivery of a full grown foetus through the anus, I am obliged to my friend Mr. Harrison, Surgeon, of Greenwich. He very kindly invited me to visit the patient, and has politely granted me permission to introduce it to public notice through the pages of that valuable Journal, the MEDICAL REPOSITORY.

On the 15th August, 1812, Mr. Harrison was solicited to attend a poor woman at Greenwich workhouse, in labour of her second child, at the full period of utero-gestation. Her pains were powerful and frequent, but, on examination, he could find no alteration in the state of the os tincæ. She had suffered these pains for several hours, which induced him to retire into another room and deliberate on the plan most suitable for her relief. During his short absence, the foetus was forced through the anus and fell on the floor, but being suspended by the funis, it escaped injury. The placenta was soon spontaneously expelled, and was followed by several coagula. The lochial discharge flowed through this new passage, and the woman finally recovered, and went into a respectable family as wet nurse. Mrs. P. was twenty-two years of age, and this was her second labour. Her sufferings were so severe from the former parturition, that she remained two days completely insensible. Her delivery was instrumental, and the perinæum was lacerated.

A few months after her recovery from the first accouchement, she married a man in the marine corps, and having become pregnant, was put to bed in the extraordinary manner above detailed. I visited her on Saturday, August 22, 1812, about eight days after this singular delivery, and found her with very little fever, with plenty of milk, her bowels open, her urine free, and every thing promising recovery. On exa-

Examining the anus, I found it lacerated in three places. One laceration was directed posteriorly, and two laterally. The right lateral rent was the largest, but in a healing state; the left lateral and the posterior were almost healed. The vagina had no entrance; indeed, this passage may be said not to exist, for the os tincæ was converted into a firm cartilaginous ring, and adhered strongly to the nymphæ. The point of the index finger entered the aperture with great difficulty, but could not by any effort be made to pass through it. The index finger of the left hand being passed up the anus, came in contact with that which entered the os tincæ.

Observations.—I have searched many authors for a parallel instance of ruptured uterus, where the foetus, having also passed through the lacerated rectum, found an exit through the anus; but can only find one analogous, and that is recorded in the seventh volume of Philosophical Transactions abridged, page 492. In this instance there was a retroverted uterus, which, being unreduced, filled up the hollow of the sacrum, and intercepted the passage of both urine and stools. The fundus uteri being in contact with the rectum, in consequence of retroversion, burst, and the foetus, about five months old, was forced through the anus instead of the natural passage;—the woman died. In Mr. Harrison's case the rupture took place in the posterior part of the neck, just above the os tincæ, and in the anterior side of the rectum—the laceration healed, and the woman recovered.

This case illustrates, most distinctly, the great danger of using instruments in obstetrical practice, unless the life of the mother demands such interference; for as a full grown foetus, in the latter parturition, was forced through the parietes of the uterus by the force of the natural pains, every man must be convinced that there could not be a necessity for them in the former. Mr. Harrison had nothing to do with the first parturition, and was accidentally called to the second.

It appears to me that her first labour was lingering, and the os uteri slow in dilatation; which state I have invariably found, in cases such as this seems to have been, speedily relieved by copious bleeding, followed by a moderate dose of opium. But I suspect, that instead of using these means, and a proper share of patience, instruments were introduced before the os uteri was fully dilated, thus bringing down that organ as well as the child; and that the prolapsus, thus produced, left the mouth of the womb in contact with the nymphæ, excited inflammation, and gave rise to its termination in adhesion. At the same time, the os tincæ still

remaining under the operation of slow inflammation, became converted into cartilage; and it would not surprise me if that cartilage should undergo a farther process, and be ultimately changed to bone.

Rotherhithe, January, 1823.

VI.

Case of Cancerous Ulceration of the Stomach. By MAURICE WORKMAN, Reading, Member of the Royal College of Surgeons, London.

I WAS sent for in December last to visit a servant, aged eighteen, of the Rev. Mr. —, of this town, who was taken ill suddenly after her breakfast with an excruciating pain in her stomach. Finding the bowels in a constipated state, I ordered an aperient mixture (magnes. sulph., tinct. rhei, and aq. menth. pip.), which had the desired effect in a few hours afterwards. She then felt slightly relieved. Gruel, tea, and mint tea, were administered during the day, but in small quantities, as she complained of nausea; no vomiting, however, ensued. About eight o'clock in the evening I again visited her. She then complained of great prostration of strength, faintness, &c. I prescribed warm fomentations and a mixture, containing spir. æther. vitriol. comp., but with a temporary relief only. Her strength rapidly failed, and four hours afterwards she expired, apparently in a fainting fit, and without a struggle.

Her master informed me that she had lived in his service six months; but that she had left her former place through an indisposition of several weeks continuance; that she was a very steady servant; and never drank wine, spirits, or beer, on account of her aversion to these liquids. To roast meats and butter, he said, she had always manifested a great dislike, and that she always ate moderately; but by reason of her delicate appetite was indulged in pies and puddings. For several months previously to her decease, after any unusual exertion, she was observed to sit down, and rub and press her hand forcibly against her left side, complaining, at the same time, of pain in her stomach. The pain, however, usually subsided in a few minutes, and she again returned to her work.

Dissection.—On opening the cavity of the abdomen, about three pints of a viscid fluid, intermixed with food, was observed; which, on further examination, proved to have issued from the stomach, through a circular aperture, formed

by ulceration in its coats. This aperture was situate on the right of the cordia, and a little anteriorly. Its inner diameter was three-fourths of an inch, and its outer, or that contiguous to the left lobe of the liver, about one-third of that dimension. To this lobe of the liver, indeed, it was found partially adhering, and no doubt was entertained but that previously it must have been connected throughout its whole circumference. For the space of about an inch around this ulcer, the coats of the stomach were evidently thicker and harder than usual, but by no means redder. There were several dusky spots in the vicinity of the pylorus, varying in depth of colour, and in some places putting on the appearance of incipient ulcerations. With these exceptions, the inner surface of the stomach seemed perfectly sound and healthy.*

VII.

Case of extensive Wound of the Genital Organs. By THOMAS CALLAWAY, Esq., Fellow of the Royal College of Surgeons, Surgeon to the South London Dispensary, &c. &c.

THE following case strongly exhibits the propriety of attempting reunion, even where the division of parts has been very extensive; as, had it not been for the irritability of mind under which the patient laboured, and which, in all probability, gave occasion to the encephalic disease under which he succumbed, perfect adhesion would, in all likelihood, have taken place.

A. B., aged fifty-two, on the morning of Saturday the 9th of November, in a fit of insanity, inflicted a deep wound on the lower part of his body with a razor: the incision ex-

* Mr. Workman has favoured us with a well executed drawing of the stomach; but as his description of the appearances of the ulcerated part is sufficiently clear, we have thought it unnecessary to insert it. The case is extremely interesting. It would appear that the violent symptoms, which supervened shortly before death, were the result of the effusion into the abdominal cavity, and that the previous ailments arose from the progress of the derangement. The history of this case, and the appearances observed in the stomach, exhibit the phenomena which are usually remarked in cancer of this organ, according to the observations and descriptions of Chaussier and Chardel, and more recently of Andral, Breschet, and Ferrus. So well marked an instance of cancerous ulceration of the stomach, which we consider this to have been, is but seldom met with in so young a subject. See the article Cancer in the fourth volume of the *Dictionnaire de Médecine*.—EDIT.

tended from the pubes downwards, dividing the penis at the part where it is attached by ligament to the symphysis pubis, and separating the whole of the anterior part of the scrotum. The spermatic cords were exposed, but not injured; the reflected portion of the tunica vaginalis of the left side was cut into, and the testes and epididymis were seen lying at the bottom of the wounded parts, but uninjured; on the right side there was an oblique inguinal hernia, which had escaped the incision.

Very considerable hæmorrhage had taken place from the divided vessels, but it ceased as soon as syncope was induced: it was therefore merely necessary to take up the external pudendal and the artery of the septum scroti, from the latter of which the principal bleeding appeared to issue. A large catheter was then introduced through the detached part of the urethra, and through the lower portion into the bladder; in this situation it was retained by means of tapes passed round the upper part of the thigh: a suture was subsequently passed through the corpus cavernosum on each side, so as to retain the divided corpora in apposition, which it accomplished very completely, whilst the divided portions of the urethra were retained *in situ* by the catheter: the integuments and scrotum were now brought up to the pubes and abdomen, and confined there by suture and adhesive straps. Laudanum and ether were given during the day and following night, in large doses, for the purpose of allaying the irritability under which he had laboured. These remedies procured him a very tranquil night.

10th.—Pulse small and quick; heat of parts greater than natural; ecchymosis at the lower part of the scrotum, near the perineum; penis œdematous—punctures were made in it, which gave issue to some serum; urine has passed through the catheter without inconvenience.

11th.—No particular change since yesterday; heat of parts diminished. *Habeat haustum catharticum cras manè.*

12th.—A dark-coloured spot, with a vesicle, had formed on the lower part of the integuments, near the root of the penis. Into this a deep crucial incision was made with the lancet, which gave issue to a small quantity of purulent matter. The prepuce, which was of great length and of a livid appearance, was slit up as in the operation for phymosis, in order that the glans penis might be fully exposed to view; this was of a minor temperature than the other portions of the penis, and much discoloured in some parts. A poultice, formed of the grounds of stale beer, was therefore directed to be applied. The bowels were freely acted upon during the night. Pulse 100, and tranquil. He was ordered

to have wine, and to take a mixture composed of the decoction cinchonæ, ammoniæ carbonas, and tinctura opii.

13th.—Pulse 120; skin hot and dry; the parts which were divided yesterday look more healthy; the temperature of the glans penis has increased, and the spots on its extremity have a white line of demarcation from the contiguous sound parts; the scrotum has become excoriated by the urine dropping over it from the catheter; has had two motions. Some strong soup has been frequently exhibited; the ceratum cetacei was directed to be applied to the excoriations, and the mixture and poultice to be continued; a bolus of calomel and opium was likewise ordered to be administered at bed-time.

14th.—Pulse 112; tongue very dry and cracked; has had a copious motion during the night; the sloughs on the extremity of the penis have begun to separate. The bark mixture was ordered to be continued, and the ammoniæ carbonas to be given with lemon juice in the state of effervescence.

15th.—Goes on favourably; sloughs coming away; pulse 112; tongue very dry. The medicines were ordered to be continued.

16th.—Early in the morning, in the effort to go to stool, the catheter came out. This circumstance produced great irritation in his mind, from a belief that he should die unless it could be replaced; with some difficulty it was again introduced, but not without causing considerable pain. The glans penis appears to be the only part to which the sloughing extends, but even here there are decided marks of attempts at separation; bowels freely opened. A mixture of the infusum cascariillæ, with the spiritus ammoniæ aromaticus, was directed to be given three times a day: the vinous stimuli, with the opium, at bed-time, to be discontinued.

17th.—A state of stupor had commenced, which only strong stimuli could dissipate; pulse very small and feeble; sloughs separating; but it appears that he has been very restless during the night, and sometimes violent. Dr. Babington saw him towards evening, at which time he became more composed, and made some family arrangements: on the following morning he died.

On examining the parts after death, the sloughs were found to be superficial, and confined to the integuments; the divided portions of the penis, which had been kept in apposition by the suture, were found united by a considerable quantity of coagulable lymph; and the corpora cavernosa and corpus spongiosum were filled with fluid blood. It is proper to remark, that owing to the delay occasioned by the

want of a catheter of sufficient magnitude to fill up the urethra, three hours elapsed between the time of the infliction of the wound and that at which the parts were brought together.

Permission could not be obtained to open the body.

High Street, Southwark, February 14th, 1823.

VIII.

On the Treatment of Puerperal Fever. By Dr. WIGTON,
Edinburgh.

BLOOD-LETTING has, of late years, been regarded as the panacea in every inflammatory infection, and in none has it been resorted to with greater confidence than in puerperal fever; but, however paradoxical it may appear, I hesitate not to affirm that blood-letting is, to say the least of it, a doubtful remedy in every case of this disease; that in many it is an efficient auxiliary in hastening its fatal termination; and that, in all the cases that I have seen, bleeding has never been requisite, because the disorder can be subdued by the early and careful employment of the simple means about to be detailed. There is, in fact, no disease, to which puerperal women are liable, more tractable than the fever of that state, provided appropriate remedies be selected and assiduously employed.

In those cases of puerperal fever which have fallen under my observation, as soon as its existence was clearly ascertained, instead of attempting to combat it, as has been recommended, by the detraction of twenty or thirty ounces of blood, I have immediately administered to the patient pulv. ipecacuanhæ et opii ℥j., or a greater or smaller dose according to the circumstances of the case; and have ordered a quantity of boiling water to be made ready as quickly as possible; also two pieces of flannel, each of a magnitude sufficient to cover the abdomen, when twice doubled. I have usually directed the flannels to be properly folded and put into the boiling water, and, when they have acquired the same temperature, one of them to be wrung as dry as possible, and, in this state, to be handed to the patient, or to a nurse, who is to insinuate it under the bed-clothes, where it is to be spread upon the abdomen. At the expiration of five or six minutes, the other cloth must be wrung out of the water, conveyed and applied as the former, which is now to be returned to the boiling water, and there to remain five or six minutes, when it is again to be wrung out and to

replace the other as before. This alternate process I have ordered to be thus conducted, with unceasing attention, and without intermission, not only until, by its operation, combined with that of the compound ipecacuan powder, the patient is in a state of free and universal perspiration, but also until the pain in the abdomen be completely gone, and pressure be borne without exciting it. This is the grand object of the practice here recommended, and which will commonly be attained long before the period at which the second employment of the lancet is usually had recourse to. To prescribe warm fomentations merely is to trifle with the disease: they must be as hot as the patient can possibly endure them. To order them to be applied for twenty minutes or half an hour at the time, or twice a day, is to prescribe by rote; such practice is seldom beneficial, and, in this disease, worse than useless: they must be employed so unremittingly, and renewed so frequently, that the effects may be active and permanent.

As soon as pain has disappeared, and the perspiration become free and general, the hot fomentations are to be laid aside; a dry and warm flannel cloth is to be applied around the abdomen, and the patient left, for an hour or more, as circumstances may require, to promote perspiration. When the sweat begins to dry, she must be carefully shifted, all the damp clothes removed, and made comfortable in every respect. During the above processes thirst is usually felt. This may be obviated by mild, tepid, and acidulated diluents. The state of the bowels, at the same time, imperiously demands attention. As the colon, in puerperal women, is, with few exceptions, in a loaded condition, it is indispensable to rectify this, either by the use of castor oil or by any other purgative which the peculiarities of the case may require. The period at which the purgative should be given is when it is found admissible to discontinue the hot fomentations. The bowels, it is unnecessary to add, should be afterwards kept in a comfortably open state. This practice is not only successful in puerperal fever, but is equally so in enteritis and dysentery; and while, in these diseases, it constitutes the chief and most efficacious means of cure, it by no means interferes with other methods, or with other remedies, which the judgment of the Practitioner may conjoin with it, according to the various circumstances connected with the patient, and with the causes of these disorders which influence their state and progress.

Edinburgh, 27th November, 1822.

PART II.

ANALYTICAL REVIEW.

I.

History and Method of Cure of the various Species of Epilepsy; being the Second Part of the Second Volume of a Treatise on Nervous Diseases. By JOHN COOKE, M.D., F.R.S., F.A.S., Fellow of the Royal College of Physicians, and late Physician to the London Hospital. London, 1823. 8vo. Pp. 235.

In a former Number of this Journal we had occasion to notice the learned author's account of the opinions and observations of a great number of writers, both ancient and modern, respecting the history, nature, causes, and method of cure, of the various species of apoplexy and palsy. The volume before us forms a second part of the author's second volume of a Treatise on Nervous Diseases, as the title imports, and treats of epilepsy; a disease generally productive of so much distress and suffering to the patient, that its nature would have been much better understood had the ancients, instead of affixing to it the term *morbus sacer*, denominated it *morbus infernalis* or *execratus*; a disease, also, which too frequently compels us to lament the inefficacy of the healing art, and which has been considered by a very eminent writer (Dr. Abercrombie) as one of the most obscure and difficult subjects in medical pathology.

Dr. Cooke commences his work with an account of the definition and history of epilepsy; but as his observations on these subjects are not possessed of much novelty, and as his semeiology does not differ in any respect from that of other writers on the subject, we shall pass on to the second chapter, which treats of the appearances on dissection.* In

* In the chapter on the history of the disease, Dr. Cooke notices an appearance which sufficiently indicates the commotion to which the vascular system is liable during its more violent paroxysms, and which points out the source of some of the lesions that are generally remarked in the brain and cerebellum in protracted cases: — "In

this chapter, the only thing which may appear novel to our readers, is the assertion of Monsieur Wenzel, Professor of Anatomy and Physiology in the College of Mayence, a man who enjoyed great opportunities for observation, and who was very zealous in his anatomical investigations on this subject, that the cerebellum has *always* been found by him very greatly injured — a part of the encephalon which had never been noticed by former Anatomists in their dissection of epileptics. M. Wenzel informs us, that having for a long time lamented the heart-rending condition of persons liable to repeated attacks of epilepsy, and conceiving that our want of success in the treatment was in a great measure owing to the nature and causes of the disease, he determined to study the complaint with particular care, and for this purpose he formed an association, consisting of several Physicians of eminence. In fifteen out of twenty cases M. Wenzel found the brain uninjured; of the other five, in two the meninges were slightly diseased; in four, an effusion of a thick lymph was observed on the surface of the brain; and in three, a considerable quantity of water in the ventricles, in consequence of which the corpora striata and the thalami nervorum opticorum were much injured; and, in one instance, a softening and enlargement of the brain was seen: but in fifteen of the twenty the brain was found to be in a sound state.

“The parts which M. Wenzel in these cases discovered to be principally affected, were the pineal gland and the cerebellum: the former often, the latter always, injured in a greater or less degree. In ten instances the pineal gland was almost entirely of a grey colour; in one, it was white on its anterior part, and of a pale red in one half of its posterior part. In another case, on the superior surface of the pineal gland, a brownish yellow transparent vesicle was observed, from which a considerable quantity of a clear yellow fluid was thrown out; in a third, the pia mater surrounding the gland was thicker than ordinary, and partly of a red, partly of a yellow colour. The pineal gland was always found softer, and in all the instances, excepting two, smaller than natural; in those two, however, it was much enlarged.

“In three instances, the infundibulum was more firm than usual,

some instances, after a violent fit, the face remains tumefied and affected with ecchymosis. M. Tissot was consulted by a patient in whom this ecchymosis was very strikingly apparent, especially about the forehead and eyes, the rest of the countenance exhibiting here and there small red spots; which, however, after a few hours, disappeared.” This phenomenon was particularly remarkable in a case of hereditary epilepsy in a lady who was lately under our care for a considerable time. The ecchymosis, in her case, seldom disappeared altogether before the second or third day after the attack:

and round about it a thick lymph was effused, which in some place could be raised up like a membrane. The superior part of the infundibulum was in this case of a red colour, and bore marks of inflammation. In one instance, through its whole length, it was extremely red.

"The most extraordinary morbid appearances, however, discovered by M. Wenzel in these dissections, were those which he found in the cerebellum. He observed that organ to be morbidly affected with respect to its surface, its consistence, its colour, its size, and the state of its internal parts. In one case, the whole surface of the cerebellum appeared unequal and furrowed; in another, about the insertion of the infundibulum, there was a very large excavation, from a loss of the substance of almost the whole of its superior surface; and in a third, there was a great depression of the anterior edge of the cerebellum. In two instances, its superior surface was of a fibrous appearance, and much furrowed.

"The colour of the cerebellum was sometimes of a pale, but more commonly of a dusky red, of different shades, and approaching to blackness; sometimes it was of a whitish or yellow colour, and in two instances its posterior lobe was of a pale grey.

"In three cases, M. Wenzel found the cerebellum very soft, but in five others, it was harder and more compact than natural. Its size was often considerably increased; sometimes, under circumstances to be hereafter mentioned, it was prodigiously enlarged.

"The most remarkable and important alterations observed in these dissections were those found in the interior of the cerebellum, which had probably occasioned its increased size, and the diseased appearances on its surface, above mentioned.

"After having made one or two horizontal sections of the cerebellum, M. Wenzel, in ten instances out of the twenty, found between the lobes, at the point of their union, a yellow, friable, solid matter, which almost always had produced not only a separation of the lobes, but a loss of their substance. This matter could easily be raised in pieces. Sometimes, at the junction of the lobes, a half fluid viscous lymph was seen separating them: sometimes, upon the superior surface of the cerebellum, spots were produced, by a collection of a perfectly white or yellowish brown lymph, which had become solid. In those cases in which the cerebellum was observed to be much enlarged, a great quantity of lymph, more or less thick, was seen between the lobes. In one instance, on separating them, a large quantity of a thick-coloured fluid was thrown out, which ran to the point of their union. M. Wenzel thinks, that if the subject of this dissection had lived longer, the fluid observed would have gradually acquired the appearance and colour of the matter seen in other cases, on examination after epilepsy. In one case, on cutting the cerebellum where the lobes touch, a round ball was observed, containing several small globular transparent bodies, much resembling the granulated substances often seen in the pineal gland. On the superior surface of the cerebellum, marks of inflammation were sometimes visible.

"These were the chief morbid appearances found by M. Wenzel, in his examinations of the brain of persons who had been affected with epilepsy. For farther particulars respecting these and some other curious appearances, I must refer to his publication." — P. 38.

We have given this long quotation from a belief, with Dr. Cooke, that Wenzel's work is but little known in this country, although it is by no means of recent publication: the French translation to which we have referred is entitled, "*Observations sur le Cervelet, et sur les diverses Parties du Cerveau, dans les Epileptiques, traduit de l'Allemand.*" 8vo. Paris, 1811.

After enumerating the different lesions which have been observed by Anatomists in different parts of the body, particularly in the heart, lungs, liver, stomach, and intestines, Dr. Cooke proceeds to the consideration of the distinctions and causes of epilepsy. The reader will find enumerated in this place the various opinions that have been advanced respecting the predisponent, immediate, and proximate causes of the disease in question; but although both this and the following chapter on the *diagnosis* and *prognosis* are exceedingly creditable to the writer as a man of talent and research, and convey to us the existing opinions on the subjects embraced by them, they are not possessed of much originality, and, unfortunately, leave us in the same degree of darkness with which we were enveloped, and which induced a learned author (Dr. Brown) to observe, in his dissertation on epilepsy, "*Est quasi terra incognita, in qua quisque pro voluntate sua vagatur, et viam deligit jam factam, aut facit. Auctores de hac re multas plausibiles et populares fabulas effinxerunt; hæc vero omnia novimus esse nihil.*"

We now pass on to the most important part of this, as well as of every other medical treatise, the observations on the *treatment* of the disease.

Dr. Cooke commences his observations on this subject with the treatment of the idiopathic disorder. Epilepsy, like apoplexy, occasionally makes its attack suddenly; sometimes, however, we are warned of its approach by symptoms of determination of blood to the head, such as vertigo, throbbing in the vessels of the head and neck, confusion of intellect, &c. Where these precursors occur in a strong person of full habit, Dr. Cooke very properly recommends depletion by blood-letting and purging; in advanced age or debilitated habits, however, he recommends that evacuation of blood should be made with great caution: under such circumstances, the application of leeches or cupping-glasses may be sufficient. In children, particularly, a disposition to an epileptic fit is sometimes manifested by a disordered state of

the stomach and bowels; in these cases, purgatives are more especially indicated. Emetics have been praised by Aretæus and others as a preventive, but Dr. Cooke thinks they may be injurious in plethoric habits. Fraser recommends opium as soon as the precursory symptoms show themselves: of this practice Dr. Cooke has had no experience. When the aura epileptica arises in parts at a distance from the head, we may try to stop it by the application of a ligature upon the limb above the part where the aura takes its origin, as recommended by Galen, Aretæus, Van Swieten, Cullen, Thompson, Loeffler, and others. Our author next proceeds to give some directions respecting the management of the patient in the actual paroxysm; but they do not differ from those usually adopted by Practitioners: he is very doubtful whether blood-letting ever produces any mitigation of the symptoms during the paroxysm, to say nothing of the great inconvenience of the abstraction of blood under strong and general convulsive action. After attention to a proper position of the body, to the removal of ligatures, and to the means of preventing injury to the patient or others, by the involuntary convulsive actions, every thing further during the fit, such as the application of acrid or volatile stimulants to the mouth or nose, frictions, &c., are, he believes, useless, if not dangerous. On recovery from the fit, if the patient be disposed to sleep, it may be encouraged; and if, when he awakes, he complains of languor or faintness, mild cordials may be administered.

When epilepsy is connected with plethora, general or partial, our author recommends depletion by bleeding and purging; emetics, blisters, setons, and issues; the restoration of discharges that may have ceased or been artificially stopped, and proper diet and exercise: of these, the most efficient are the two first. After alluding to the opinions of several ancient and modern writers in confirmation of the advantage to be derived from blood-letting in this disease, Dr. Cooke proceeds to mention some cases, by Mr. Earle, wherein pressure on the carotid arteries and very free bleeding, especially the latter, were found to be decidedly useful in moderating the determination of blood to the head.* Mr. Earle's

* It does not very clearly appear that the external pressure which was recommended was actually of service. Indeed, we cannot see how pressure can be thus applied to the carotid, so as to obstruct the flow of blood in it, without retarding, in an equal degree, the return of this fluid by the large veins that are situated so close to that artery. If, by pressure thus made on the carotid, we diminish the arterial blood in the head, we at the same time inevitably increase the

communication concludes with the appearances which he has observed on the dissection of epileptics: "out of five dissections," he observes, "I have made of the brains of epileptic patients, I found two with tumours in the cerebellum and cerebrum, and three with ossific productions from the basis cranii, which had induced chronic disease in the contiguous meninges and substance of the brain. I have just received an account of a dissection, in which part of the sphenoid and ethmoid bones were in a carious state." After noticing the different drastics that have been recommended by various authors in this affection, and observing that powerful cathartics may be perhaps administered in strongly marked plethoric epilepsy, not only with impunity, but with advantage; but that, under other circumstances, he would not venture to employ them; our excellent author refers to the exhibition of emetics for the cure, as well as prevention of the disease, which he by no means recommends, and afterwards passes on to the subject of issues. "As these means," he observes, "do not seem capable of doing mischief, and as they may tend to diminish a plethoric state of the system, I venture to recommend them in the kind of epilepsy of which I am treating."

Where the menstrual or hæmorrhoidal discharges have suddenly ceased, and epilepsy been produced or aggravated, it is of the greatest consequence that they should be restored, if possible, by general or local blood-letting, pediluvia, and "other means pointed out by authors;" and where, in infants liable to epilepsy, a fetid ichor is discharged from the head or other parts, it is recommended to be promoted as much as possible, or, if it have ceased, endeavours should be made to reproduce it, by frequently washing the parts with warm water, or gently stimulating lotions: "in these cases, warm plasters, with a small quantity of cantharides, have been found useful." In plethoric epilepsy, it is of the greatest consequence that a proper diet and regimen, in every respect, should be observed. Too great a quantity of nourishment and too much sleep are very hurtful. Animal food, or whatever is calculated to make much blood, should be avoided, or taken in small quantity only. With respect to the means of preventing or diminishing plethora, especially by diet and regimen, much valuable information is said to be found in the works of Tissot.

Dr. Abercrombie is of opinion, that the only remedies of real efficacy in these cases, are purgatives and a strictly

quantity of the venous blood. Whether is arterial or venous plethora the more intimately connected with the production of the paroxysm; and, indeed, with the pathology of the disease?

vegetable diet, with total abstinence from strong liquors. When the disease has not yielded to this mode of treatment, he informs the author that he has not found it give way to any medicines. Dr. Cooke appears to place no confidence in the cold bath: the cold affusion to the head, however, deserves attention under several circumstances of the disease. We have prescribed it with advantage, and Dr. Löbenstein-Löbel, who has lately written a good book on Epilepsy,* although he very strongly objects to the use of the cold bath, as warmly recommends the cold affusion to the head, and describes, very minutely, the modifications of the disorder in which this practice is most beneficial. When the disease is induced by onany, or an intemperate indulgence of the venereal appetite, this writer considers it to be most successfully combated by the affusion of cold water on the head and organs of generation, in conjunction with the other means which the circumstances of the case may point out.

When the predisposition to epilepsy or the actual disease seems to depend upon *debility*, a different plan requires to be adopted. In these cases, depletion by free blood-letting or drastic purging would prove injurious: the bowels, however, must be kept open, and if signs of fulness in the vessels of the head appear, topical bleeding in moderation may be employed. In this kind of epilepsy, a variety of *tonics* and *antispasmodics* has been very generally recommended. Among these, Dr. Cooke says, may be reckoned cold, in a moderate degree, exercise in the open air, and nutritious diet; at least, he considers they may be powerful assistants to tonic medicines. The cold bath has been recommended by some celebrated writers, but he does not think it advisable even in epilepsy connected with debility, when there is any appearance of fulness of the vessels of the brain. The cold affusion to the head is, however, frequently serviceable in this form of the disease. Fear, or some degree of terror, has been thought by some eminent authors to be useful in epilepsy, but Dr. Cooke very properly estimates them of doubtful use, as they are not sufficiently under our control; in consequence of which, he would be afraid to employ them.

Our author now proceeds to the enumeration of the various sentiments advanced by writers respecting *tonic medicines*,

* This work contains a considerable mass of information respecting the treatment of this disease. We have reason to believe that very few copies of it have reached this country: it is entitled — “Wesen und Heilung der Epilepsie von D. Eduard Löbenstein-Löbel, Professor ordinarius honorarius der Medicin, &c. &c. 8vo. Leipzig, 1818.”

and, 1st. those derived from the *vegetable* kingdom : — *bark* and *bitters*, the *leaves of the orange tree*, the *meadow narcissus*, and the *viscus quercinus*, are spoken of, each in its turn ; but Dr. Cooke does not advance his own testimony in favour of any of them.

The *metallic tonics* chiefly recommended in epilepsy, are *silver*, *zinc*, *copper*, *lead*, *arsenic*, and *mercury* ; among these, the *nitrate of silver* has been most distinguished. In addition to various accounts given by authors respecting the successful employment of this substance in epilepsy, Dr. Cooke communicates some valuable information on the subject, with which he was favoured by his friends Drs. Baillie, Richard Harrison, Roget, and James Johnson, which he earnestly recommends to the notice of the reader. Some interesting observations are drawn from the author's stores, as well as from those of some of his friends, respecting the very extraordinary discoloration of the skin, frequently occasioned by this medicine when given for a considerable length of time : it has been conceived, by some individuals, that this medicine is more particularly efficacious when it produces such discoloration ; but the experience of others does not confirm this opinion.

Next to the preparations of silver, *zinc* has been considered the most useful remedy in epilepsy. Our author, however, observes that he cannot, from his own experience, speak in its favour in epilepsy, although he has found it beneficial in *chorea Sancti Viti*, and other nervous diseases.*

The *cuprum ammoniatum*, *acetas plumbi*, *filings of tin*, *deutriated oxyd of that metal*, † *mercury*, in "almost every form, and to almost every extent ;" *antimony*, in different preparations, especially the *tartrate*, which Dr. Abercrombie informed our author he had seen very good effects from, when patients were kept under its influence, in such doses as the stomach could bear, repeated four times a day ; and *arsenic*, in the form of *Fowler's solution* — are all treated of with testimonies in their favour, adduced by those who have brought them forward.

Dr. Cooke next treats of the various antispasmodics and narcotics which have been administered for the cure of this

* Dr. Cooke has the following note at this place : — " Perhaps the different accounts we have of the effects of zinc in epilepsy may be understood, when we recollect that zinc contains *cadmium*, in different proportions, which may be the active part of the composition." — P. 161.

† LONDON MEDICAL REPOSITORY, Vol. XVIII. p. 190, by Dr. Shearman.

rebellious disorder. Of these, the principal antispasmodics are *valerian*, *assafatida*, *camphire*, *castor*, *musk*, and *ether*; to which some add *phosphorus* and *oil of turpentine*. The chief narcotics are *opium*, *hyoscyamus*, *stramonium*, and *digitalis*; each of these is said by authors to have been administered with great advantage in epilepsy, but our author adds no additional testimony from the results of his own experience.* Respecting the employment of galvanism in epilepsy, Dr. Cooke has found nothing worthy of notice, excepting a case of complete cure said to have been effected by it, detailed in the 14th volume of the Medical and Physical Journal, and a second in the 8th volume of the Annals of Medicine.

"By the above-mentioned means," says our author, "we endeavour to fulfil the first indication in the cure of epilepsy, namely, to remove or to diminish the predisposition to the disease. The second indication, which is to remove or diminish the influence of the exciting causes, equally requires our attention; for should we fail in our attempts to correct predisposition, we may perhaps prevent excitement, by weakening the action of these causes, and thus obviate the attacks of the complaint. The fulfilment of this indication is often exceedingly difficult, especially where the disease depends upon causes acting mechanically on the brain or its membranes; indeed, so difficult, that many Practitioners have considered such cases as wholly hopeless."—P. 194.

The first remedy, to fulfil the latter indication mentioned by Dr. Cooke, is the use of the actual cautery. Very copious details are entered into respecting the estimation in

* We may here take this opportunity of remarking, that the *oil of valerian* is one of the medicines most in use, amongst German Practitioners, both in this and in many other derangements affecting chiefly the nervous system. It is given in large doses in epilepsy, hysteria, &c., and is much praised by Dr. Löbenstein-Löbel and others. These authors also generally employ it in the spasmodic diseases of children. It possesses many advantages over the powder of the root, the efficacy of which entirely consists in the oil which it contains. We may also notice the recommendation of *musk* by the writer just mentioned in the epilepsy of children, especially when the nervous system betrays great morbid sensibility: when the disease is chronic, and the child weak and emaciated, bark with camphor, and frictions along the spine and lower extremities, are proper. If the child be irritable and fretful, the oil of valerian should be prescribed.

Dr. Löbenstein-Löbel offers very minute observations on the treatment of a species of epilepsy which appears on the cessation of the menses, and says that, in such cases, he has given, with uniform success, the *tincture of nux vomica*, commencing with sixteen drops every three hours, and increasing it gradually to twenty-five, and even to a much greater dose.

which it was held by the ancients, and the works of Baron Percy and of Gendret are referred to amongst the moderns. The most copious account, however, of its application in epileptics, is contained in a small brochure, by Professor Valentin, of Nancy, to which we had occasion to refer in the December Number of the Repository, and to which Dr. Cooke has not made any allusion; the work in question is entitled, "*Mémoire et Observations concernant les bons Effets du Canthare actuel, appliqué sur la Tête, ou sur la Nuque, dans plusieurs Maladies des Yeux, des Enveloppes du Crane, du Cerveau, et du Système Nerveux.*" We have never had an opportunity of witnessing the application of the actual metallic canthary when applied to the head for the cure of epilepsy and other affections of the encephalon; but we have observed the very best effects, within the last few months, from the application of the moxa, in our own practice, as well as in that of a highly respectable and intelligent friend. Of two cases of epilepsy, where it was applied at intervals of a few days, in the one the paroxysms were evidently diminished in frequency and severity under its application, and in the other they were wholly removed. The particulars of these cases we shall take an early opportunity of laying before the public in the pages of this Journal. We refer the reader to the work before us for various cases of the successful employment of the means above mentioned, as well as of blisters, issues, caustics, setons, &c.

"These are the means," says Dr. Cooke, "most highly spoken of for the cure of epilepsy, depending upon or connected with mal-formation of the cranium, exostosis, depressed bone, a diseased state of the investing membranes, or any cause acting mechanically upon the surface of the brain, and also in some cases depending upon other causes; and although this treatment may give occasion to much pain and inconvenience, I think the accounts we have of its success, in so many instances, will warrant a trial of it, especially as, under proper management, it is not likely to prove injurious."—P. 206.

Where epilepsy arises from "certain affections or passions of the mind; certain impressions made on the senses by disagreeable sights; disgusting odours or sounds; excessive or suppressed evacuations; metastases, by retropelled eruptions, &c.; violent exercise; exposure to great heat; intoxication, and irregularity of diet," these causes must be avoided or remedied by the usual means.

Some very intelligent observations are next indulged in, on the best means of alleviating certain morbid affections of the viscera of the abdomen and pelvis, particularly of the intestines and uterus, of which epilepsy is sometimes symptomatic;

to these our contracted limits compel us to refer the reader. The work concludes with some remarks on various empirical applications which have been used in epilepsy; the adoption of which our author very properly deprecates.

We have thus endeavoured to lay before our readers from the work before us some account of the various means which have been recommended for the cure of this too often intractable disease, the perusal of which cannot but impress the philanthropic individual with feelings of regret that they should all occasionally be productive of so little benefit. If Dr. Cooke has failed to present us with much originality either as regards the nature or treatment of epilepsy, he has embodied the sentiments of others clearly and satisfactorily, and in a manner which must ever stamp him as a man of learning and research. We strongly recommend to our readers not only his present production, but also those on the history, causes, and method of cure of apoplexy and palsy, as containing a most valuable condensation of our existing knowledge on these most important nervous diseases.

II.

Illustrations of the Inquiry respecting Tuberculous Diseases.

By JOHN BARON, M.D., Physician to the General Infirmary at Gloucester. 8vo. Pp. xxxii. 233. With Plates. London, 1822.

DR. BARON'S former work, on the nature of tuberculated accretions of serous membranes, and on the origin of tubercles and tumours, received a full analysis in the twelfth volume of the REPOSITORY. The publication now before us contains more detailed illustrations of the chief topics which engaged the author's attention on that occasion, while it, at the same time, examines the opinions of some eminent writers as to the nature of this species of structural derangement.

In the account which we are about to give of the doctrines of the author, as they appear in the present work, we will endeavour to abstain from criticism, as far as we can, with the expectation that some future opportunity will permit us to indulge this propensity with respect to them.

The writings of Dr. Baron are strictly pathological, and therefore, with all their faults, we think them valuable. We like to see attempts made to inquire into the nature and cause of derangements, although these attempts may prove crude and abortive; but when inquiries, of even this description, come before us, connected with interesting facts in pathology, we forget the sins, which are committed in

attempting to explain them, in the importance of the facts themselves.

After having, in a long and elaborate introduction, professed the sincerity of his faith in the doctrines which he endeavours to establish, and set forth, at great length, the obstacles to our advancement in medical knowledge, and criticized the conduct and theories of both predecessors and contemporaries, and blamed the ill use of words, and the want of logic, in medical writings, and deprecated any misinterpretation of his conduct with respect to the opinions of others, and, finally, contended for the precision of the language, and the propriety of the terms, which he has employed, the author proceeds to trace "the progress of pulmonary tubercle."

Before, however, entering on this subject, he states the following general propositions, which he conceives to have been established by the former inquiry, and which it is the purpose of the present to illustrate:—

"First, then, I affirm, that tubercles exist in almost every texture of the body, and that their origin and essential character will probably be found to be the same, wherever they are discovered.

"II. That tubercles, in their commencement, are small vesicular bodies (i. e. hydatids), with fluid contents.

"III. That these bodies subsequently undergo transformations, on the nature of which their tuberculous character depends; that these transformations are progressive, but not uniform, and that it is only in the larger bodies of this kind that they can be accurately traced. That they commence with an opaque spot, which advances with different degrees of rapidity, and ultimately converts both the contained and containing parts into substances very different from what they were at first.

"IV. That on the size and relative position and structure of the tubercles, which are thus formed, depend the characters of many of the most formidable disorganizations to which the human body is exposed.

"V. That, considering the transmutations which these bodies undergo, the condition in which they may be found will be modified by the time at which they may happen to be examined.

"VI. That it is rarely that we can have an opportunity of seeing the first steps of these morbid phenomena in the human subject, because the tubercles are generally formed, and the elementary character of course lost, before death permits us to make inquiries respecting altered or morbid structure.

"VII. That these tumours are formed by the aggregation of tubercles, and that the characters of such bodies are materially influenced by the relative position and contents of the elementary parts of which they may happen to have been composed; or, in other words, that varieties in the arrangement of the elementary parts of

morbid growths will of course cause corresponding varieties in their appearance.

"VIII. That, therefore, diversity of appearance in tubercles or tumours does not imply diversity of origin, for it has been demonstrated that substances and textures of very different properties may be found even within the same cyst, thereby merely denoting different gradations in the changes to which these bodies are liable.

"IX. That the disorganizations above referred to are not the product of any species of inflammation, and that though inflammation may attend their growth, and modify the symptoms which they occasion, yet that it is very different both in its origin and consequences from that species which attacks a part unaltered by previous disease; that in the first instance it is to be considered as the consequence, and in the latter as the cause of altered texture."—Pp. 4—7.

We leave our readers to form their own opinions respecting the correctness of these views, and proceed to notice the author's illustrations of them, in relation to tubercles of the lungs. On this subject he offers the additional remark, that should a small number of tubercles be generated, "the symptoms and morbid appearances may be very different from what they are when a large quantity are evolved." In the former case, they generally attain a much larger size than they do in the latter; "and then they may produce either a vomica, or a tumour, or both." In the other case, "which is by far the most common, the size which a tubercle may attain is necessarily limited by the number and position of those by which it may happen to be surrounded." We shall lay before our readers, in the author's words, his account of the progress of pulmonary tubercles:—

"When tubercles are first formed in the lungs, they are not cognizable by the touch, but they are visible on careful inspection. They are very small vesicular transparent bodies, and shine amid the unchanged texture of the surrounding lung. Should any of them happen to have been generated on the surface of the membranes, they there may be seen clustering together, and resemble both in size and general character the beautiful globular incrustations which beset the stalks and leaves of the ice plant. In the human subject it is *very rarely* that we can have an opportunity of detecting them in this their primary state. . . . At a later period the softness and delicacy of the vesicle is lost, its transparency is diminished, and its size is increased. On examining the lung where they may exist, by the touch, a distinct granular sensation is communicated to the fingers. The progress from this period is evinced by an augmented size, a firmer texture, and a complete loss of transparency, a yellow opaque body being perceptible. In this state they sometimes fall into ulceration and prove fatal. But before such an event takes place, it occasionally happens that many of them advance further, and exhibit other appearances. Except where they are in contact with each

other, they go on increasing in bulk. The coats of some become thick and hard, and almost cartilaginous, while their contents may vary both in colour and consistence. Others proceed in a different way, and are condensed into solid bodies of an uniform texture, the cysts and the containing parts being scarcely discernible from each other."

"The appearance, then, of the lungs of those who die in this state is as follows: some tubercles, when cut through, will be found to be firm and solid, others with thick dense coats, containing curdy, cheesy, or purulent looking substances; others will be found to have been in part destroyed by the progress of the ulceration, and to show the firm and almost cartilaginous remnant of the emptied cyst, conspicuous amid the surrounding disease. Should a great number of contiguous tubercles have fallen into this state, deep and extensive and irregular shaped fissures and excavations are thereby formed."—*Pp. 10—12.*

Dr. Baron goes on to describe the corresponding changes which take place in the surrounding parts during the progress of the tuberculous disease, and informs us that, "at the first development of the tubercles, whether in the lungs or elsewhere, the surrounding texture seems to undergo little or no alteration. The lung retains its fresh pink colour and light elastic feel, and there appears to have been no interruption either to the circulation of the blood or air." As the tubercles increase in size and density, and approximate each other, the blood is impeded in its circulation, and respiration is rendered quick and laborious on slight exertions. "The lung becomes firmer and of a darker colour," and ultimately exhibits the appearance usually called hepatization.—Dr. Baron proceeds to remark, that,—

"Whether this (hepatization) be an idiopathic affection or not, it is not at present material to inquire; as, in such examples as we have described, it is manifestly occasioned by the growth of foreign bodies in the lungs; and the darkness of its colour and its induration increase in proportion to the obstruction which is offered to its functions."—*P. 13.*

Our readers will have noticed, through the whole of this description and of the fundamental propositions, which the author commenced with stating, that two propositions are assumed without satisfactory evidence having been adduced in support of them, either in the former or present works. He states as first principles that tubercles are an advanced state of hydatids, and that these hydatids give rise to many of the phenomena, which are observed in the last stages of tuberculous diseases, and, amongst other appearances, to hepatization, tumours, and vomicae. Now, we cannot refrain from thinking, that, if Dr. Baron had observed those rules of

philosophizing, which he has quoted from Lord Bacon in the introduction, for the neglect of which he blames his predecessors and contemporaries, he would have given us, in the first place, some preliminary observations on the nature and origin of hydatids, and have endeavoured to point out those appearances which are really hydatids, and those which are not — appearances respecting the nature of a great proportion of which, pathologists are by no means agreed. Such a distinction was absolutely requisite, unless, indeed, he supposes, what we think none will have the hardihood to assert, that every lesion of structure, which assumes a vesicular, tubercular, or similar character, actually is those parasitic animals, *i. e.* hydatids.

Dr. Baron next proceeds to describe the symptoms by which the progress of tubercular disorder of the lungs is recognised. He conceives that tubercles, when not numerous, may become consolidated, and continue in this state without producing much disturbance in the system, or tending to abridge life. When they arrive at this condition, it does not appear that they subsequently fall into a state of suppuration: consolidation may, therefore, be considered as a favourable termination to tubercular formations, “except in cases where they occupied a large proportion of the lung, or produced accretion of the membranes.”

“It may happen that considerable intervals of time may exist between the ulceration of each tubercle; and even after successive events of this kind have taken place, the patient may recover. The inference to be drawn from such cases, is, either that there were not a great number of tubercles in a state to undergo the ulcerative process, or that, in consequence of favourable circumstances or judicious treatment, the tubercles may have been brought into a quiescent state, and subsequently proceeded to consolidation.” — . . .

“The appearance and the quantity of the matter expectorated, differ much at different periods in the same case; that which is discharged from a tubercle strictly so called, varying from that which may be excreted from the disease of the mucous surfaces, which has been excited by the tubercular affection. The appearance of the pus by no means, as is generally supposed, necessarily indicates the presence of tubercles, for the contents of these bodies are very often far from being purulent.”

These remarks are very just, and agree with our own observation. Dr. Baron goes on to observe, that “the dark-coloured and indurated state of the lung is probably more frequently a symptomatic than an idiopathic affection;” and he appears to believe that such a condition of this organ is usually the effect of the tubercles. Here we differ from him, for we consider that both states of disease

have their source in other causes, which our readers will see explained at p. 377, of our fifteenth volume.

"When the dark-coloured indurated state of the lungs exists to any great extent around tubercles, which are undergoing a process of dissolution, the dark-coloured and diseased lung itself seems also to fall readily into decay, and the appearance of the tubercles in such a medium gives a character to the disease, which by some has been deemed essential and specific, whereas it is only casual and adventitious. When it occurs to any considerable degree, the difficulty of breathing is generally greater than when it does not exist, and there is, for the most part, likewise a livid appearance about the lips and countenance, which is not seen in other cases."...—P. 19.

"When tubercles attack the membranes of the pleura, without pervading the lungs to any considerable extent, 'a variety of disease is generated, which leads to a fatal issue, but without all the symptoms characteristic of tubercles in the lungs.' In both instances the disease is the same, though the part affected be different. The combination of the two produces some peculiarity in the symptoms, which it may be proper to allude to.

"Tubercles in the pleura cause sometimes effusion into the cavity, more frequently accretion. When the latter event takes place, there is cough and dyspnoea and a rapid pulse, but no expectoration. But when tubercles in the lungs, in a state of ulceration, are added to it, we have, in conjunction with the symptoms already enumerated, the expectoration of tuberculous matter, hectic fever," &c.—P. 20.

"When accretion of the pleura has taken place, during respiration the shoulders are drawn forwards, the ribs do not move as in the natural state, the whole chest heaves at once, and most of the muscles on the trunk of the body seem to be called into action. On striking the chest of a person in this state, the sound emitted is like that produced by the percussion of a solid body."—P. 21.

Dr. Baron next proceeds to illustrate the different varieties of appearance, which tubercular disease of the lungs assumes, by detailing some interesting cases, and also by referring to the plates, which are given in the volume. We can recommend this part of the work to the attentive perusal of our readers.

Respecting the nature of the melanosis of French authors, Dr. B. offers no opinion.

In *Chapter Second*, our author offers some observations on tuberculous diseases of the inferior animals. We were pleased at noticing the title of this chapter, because we think that the disorders of the lower classes of animals are of sufficient importance to claim more attention than they have hitherto received, inasmuch as they furnish important illustrations of some of the most dangerous maladies to which the human subject is liable, and allow those derangements which give rise to, or depend upon, remarkable lesions of texture,

to be investigated at the different stages of their progress. We were, however, disappointed when we found, at this place, only some criticisms on those vesicular and tubercular derangements of structure, which M. Dupuy, a French Veterinary Surgeon, of considerable science, had described, with great accuracy, two years before the appearance of Dr. Baron's first work.*

The author next enters on an examination of the opinions of some of the older writers as to the nature of tubercular formations. We cannot follow him through this chapter, nor can we notice his criticisms on modern writers, which constitute the fourth and fifth chapters, and indeed, nearly two-thirds of the volume, farther than to inform our readers, that the opinions of Bayle, Laennec, Broussais, and Abercrombie, respecting the origin of tuberculous and encysted derangements of structure, are minutely and severely examined, and in a spirit that savours more of controversy than we expected to find in a work apparently intended to advance, and which, we have no doubt, will advance the study of pathology in this country. Dr. Baron endeavours to show from the descriptions, observations, and doctrines of the authors just mentioned, that his views are right, and that theirs are wrong, with a minuteness of criticism, and a severity of remark, which, in our opinion, tends but little to establish his hypothesis. Attentive observation and research will show how far he is entitled to declaim against the theories of his contemporaries; and any reader who is possessed of tolerable information, will be able to decide whether Dr. Baron ought to denounce the whole profession for the abuse of words, and for the neglect of every other principle of sound reasoning, with strict propriety as to himself, when he is as deficient in logical correctness, and sins as much against the *novum organum*, to which he so frequently appeals, as any of those whom he criticizes. We well know that it does not more necessarily follow that he, who finds fault with the opinions of another, is himself correct with regard to the same, or similar topics, than as Dr. Johnson retorted, that "HE who kills fat oxen should himself be fat;" but as we are led to believe, from the

* M. Dupuy's publication contains some very interesting facts and descriptions, which well deserve the attentive consideration of pathologists. It is entitled — "De l'Affecti^{on} Tuberculeuse, vulgairement appellée Morve Pulmonie, Farcin, Fausse Gourme, Pommelière, Phthisie du Singe, du Chat, du Chien, et des Oiseaux Domestiques. Par M. Dupuy, 8vo. A Paris, 1817.

evidence with which daily observation supplies us, that the killer of fat oxen should be fattened by them, so we would expect that he who condemns the reasoning of his contemporaries should profit by his own criticisms, and look to the basis on which all his hypotheses and arguments are founded. Now, we do assert that Dr. Baron has assumed data which have not been proved, the majority of which are disputed, and others are altogether denied. Thus, he places as major propositions the following postulata: "that tubercles in their commencement are small vesicular bodies with fluid contents;" that cysts, or vesicular bodies with fluid contents, are hydatids. Although these affirmations may be true with respect to particulars, they are by no means so as to universals; yet Dr. Baron states them as universal affirmative propositions, notwithstanding that neither he, in any of his writings, nor any other pathologist, has furnished proof of their universality. If our time or limits could permit, we could point out other instances of the *petitio principii*, of the *non causa pro causâ*, and the *fallacia accidentis*, not less objectionable than those which he criticizes; but as our author is a logician, a close examination of his own doctrines will disclose to him their faults.

The sixth and concluding chapter of the volume is on the treatment of tuberculous diseases. Into this subject we have great pleasure in following our author. He does not, however, profess to go fully into this subject, but to offer a few remarks suggested by the doctrines which he has endeavoured to support.

"The circumstances," he observes, "which seem chiefly to predispose to the generation of these diseases, are cold, moisture, and bad food." "It is likewise to be observed, that when the animal frame has been deteriorated, from whatever cause that deterioration may have arisen, there is a disposition to transmit to the offspring of such animal the impaired constitution of the parent." "In no class of diseases is the effect of hereditary taint more frequently observed than in pulmonary tubercles."—P. 212.

"Since it appears that whatever enfeebles the frame, or deteriorates the constitution, predisposes to the diseases in question, how shall we avert this predisposition? The answer is apparent: we must do every thing in our power to invigorate and fortify the tender frame; to bring all its functions into a healthy state, and by all means to endeavour to keep them so. But, suppose that this cannot be effected;" "that change of structure has actually commenced; what, in that case, is to be done? We must first seek the absorption of that change of structure; or, at all events, prevent its increase."—P. 216.

Now, supposing, for a moment, that Dr. Baron's theory is the true one, and that tubercles of the lungs are really

hydatids, *i. e.* parasitic animals possessed of the faculty of an independent and separate existence for a longer or shorter period, it will be no easy matter to explain how we can procure their absorption or prevent their increase. Before we can accomplish the former, it will be necessary to destroy their vitality; for we cannot believe that the absorbents will act upon any structure that is in the full possession of life, especially when such living structure is situated externally to the axis of the absorbents of the part which contains it, and possesses no vascular connexion whatever with the surrounding textures. Dr. Baron may, however, say that these cysts or tubercles, which he calls hydatids, have a vascular connexion with the textures which envelope them. If he grant that, then we maintain, with other pathologists, that these are not hydatids. It rests with him to prove the contrary: he has hitherto failed in doing so; and until he has done so satisfactorily, he must still excuse us for doubting. We return with much more satisfaction to the curative indications, which he endeavours to establish. This part of the work we strongly recommend to the attention of our readers.

“If, therefore, we possess any means of amending what is called a scrofulous constitution, or of removing it, after it has shown itself in that form, to which the word *scrofula* is particularly applied; we have sufficient grounds for believing, that what is efficient in regard to an external disorganization may be beneficial in counteracting an internal one: and, moreover, that if we can by any means succeed in changing the habit of a body, which is disposed to outward diseases of this kind, and bring it into a state of health and vigour; that we thereby take the best methods of counteracting similar tendencies in other parts of the frame.

“As far as my experience goes, there is no remedy which possesses such powers in promoting the absorption of morbid growths as the hydriodate of potass. The reports of the influence of this remedy in curing bronchocele, as published by Dr. Coindet, of Geneva, first brought it to my notice. The nature of my own inquiries had led me anxiously to look for some agent of this kind; and having been fully convinced of the affinity between bronchocele and the diseases of which I had treated in my Inquiry, I considered it extremely probable, that a remedy which could remove the first-mentioned species of disorganization might be very beneficial in the others. On this principle I acted; and the result of my trials has fully justified the anticipations which I had formed.”

Dr. Baron next proceeds to record some cases of external tumours in which the hydriodate of potash in solution, in the dose of eight or ten drops twice a day, and an ointment containing the same preparation, were administered with great benefit. He afterwards relates some cases of internal tuber-

cular disorder in which the same medicine was prescribed, we believe, for the first time, in this country. The following case is interesting :—

“ A young gentleman, of a delicate frame, had been long affected with frequent cough ; but at first he did not expectorate at all. He lost flesh ; his pulse increased in velocity ; his respiration was frequently hurried ; and his countenance and manner indicated most serious disease. He had been in this situation for many months ; when, after a fit of coughing, more violent than usual, a small globular-shaped, but somewhat flocculent mass of tuberculous matter, partially tinged with blood, was discharged. The expectoration of such matter having occurred a great many successive times, at considerable intervals, tended to strengthen my apprehensions. I dwell upon these particulars, because, without such proofs as they disclose, no fair estimate could be formed of the value of the remedy on which I chiefly relied for the removal of the complaint. I consider it, therefore, as proved, that the patient in question had tubercles in the lungs ; and that they were rapidly hastening to that stage when recovery becomes almost hopeless.

“ My plan of treatment was the following : I kept him in a regulated temperature ; I stimulated the chest occasionally by blisters and tartar emetic, and confined him to a strictly vegetable diet. At the same time, anodynes were occasionally used, to abate the frequency of the cough. But knowing that all these means, unless the tubercles themselves could be got rid of, would be of little avail, I administered such remedies as appeared most likely to promote that object. I began with the use of Brandish's caustic alkali, in a little compound infusion of orange-peel, twice a day. After employing these remedies for some weeks, I resolved to give him the hydriodate of potass. He began with eight drops twice a day ; and continued it for three weeks without intermission. It was then left off for about a fortnight, and resumed ; the quantity having been increased to ten and twelve drops. The consequence of this treatment has been an almost complete removal of the cough ; an entire cessation of all expectoration ; a complete freedom of breathing ; a reduction of the pulse to its natural standard ; a healthy state of the stomach and bowels, and a decided augmentation of flesh and strength. The patient is able to take long-continued and active exercise on horseback, and has consequently been exposed to considerable alternations of temperature, without suffering inconvenience.”—P. 228.

The author says he has ordered the remedy in a considerable number of other cases of pulmonary consumption. In these, however, “ extensive ulceration had already taken place, and all the most threatening symptoms of approaching dissolution existed.” He concludes the volume with the following opinion as to the benefit, which may be expected from the employment of the hydriodate of potash in the disorders which he has been attempting to elucidate :—

“ The facts detailed in this chapter touching the use of iodine,
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will be held, I doubt not, by my professional brethren, to confirm the reports of this medicine as given by Dr. Coindet. I agree with that gentleman, that it has a distinct and direct effect upon the lymphatic system; and that we now seem to be in possession of a remedy calculated to prevent and remove many of the most untractable and hitherto irremediable of human maladies. I have scarcely experienced any of the inconveniences which, he says, sometimes arise from its use; and I am rather inclined to think, that mere friction or inunction will not, in many cases, be successful, without also giving it internally."

We now take leave of Dr. Baron for the present. The pathological facts and descriptions, which are contained in the first and second chapters of his present volume, are calculated to enlighten many; and, notwithstanding their faults, they are qualified to promote a desire after pathological research amongst us, if they should even fail of directly advancing this branch of study. The controversial chapters, in our opinion, tend not, in any measure, to establish his views. We would, therefore, advise him to leave them out of a second edition, or, at least, to alter their tone and spirit: we have already stated our reasons for this advice. His practical observations meet our approbation. These we recommend to the attention of the Profession.

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

La Médecine Légale, relative à l'Art des Accouchemens, &c. &c.
Law Medicine, as it relates to Midwifery. By J. CAPURON,
M.D., Professor of Midwifery, &c. &c. Paris, 1821. 8vo.
pp. 521.

(Concluded from page 162.)

We have briefly announced the general facts, on the assumed propositions which the continuation of M. Capuron's work discusses at large; and we shall now proceed to the consideration of the doctrines of pulmonary evidence, in the order observed by our author. In giving an epitome of the circumstances indicative of non-respiration, besides those already stated concerning the lungs, he remarks, that the

pulmonary vessels are empty, or nearly so, of blood, but that the arterious and venous canals are filled with that fluid; the foramen ovale in the heart is open; the diaphragm considerably arched towards the thoracic side; the urinary bladder commonly full of its fluid, the stomach containing mucus and the intestines meconium—the mouth shut, and the tongue applied to the palate. On the other hand, where respiration has taken place, the thorax is every way enlarged; the lungs are in the state we have noticed, the right particularly dilated if respiration has been imperfect. On cutting into them, crepitus follows the scalpel, caused by the bursting of air from the cells. They give resistance to pressure of the fingers; yield more and redder frothy blood; the canals are empty; while the pulmonary vessels are gorged with blood, and other circumstances in the reverse of the state appropriate to the other case. Here we are indebted to M. C. for a valuable observation, which the indolence of many Practitioners seems, at the present moment, to call for.

“One must be very blind, or very uncandid, to refuse to the signs belonging to each of these series the degree of certainty they merit, and not to regard them as positive or negative proofs of respiration, *when taken together*. It would not be so were they taken separately; for we must confess, that when each is considered by itself they are less important, and are even insufficient to settle the question at issue.”

This meets our own view of the subject, and certainly the due examination of a child under these circumstances is a tedious and troublesome task, and one that cannot be effectively performed but in progressive order. For taking one step, before another that should have the precedence, may mar the whole process; while in the right manner of making the investigation, it will be difficult for a judicious Practitioner to avoid forming an opinion satisfactory to himself where the subject is a proper one. By this we mean that peculiarities may now and then be found in the structure or state of parts to set aside the propriety of giving any decided opinion.

“The pulmonary test,” says a recent writer,* “is no longer a simple trial whether the lungs are buoyant or not, though this phenomenon is of high importance and great value in the estimate; but it consists, moreover, in examining the thorax, lungs, and parts that undergo a change in consequence of respiration,” &c.

Now, it is necessary to remark, that some distinguished writers have proposed the modification of the respiratory

* *Rapports et Consultations de Médecine Légale*, par Ristelheuber.

proof by measuring the dimensions of the thorax, the depression of the diaphragm, elevation of the sternum, &c. All these may be taken into account as articles of a concurrent nature, and as *parts* of the proof. But of themselves they are of no great import, and, taken singly, are inadequate to enable us to come to any conclusion. Granting that the dilatation of the lungs will dilate the thorax, we know they may be artificially dilated after death. Besides, we cannot form a standard by which to compare the degree of dilatation. In like manner, though attention should be paid to the urinary bladder and the intestinal canal, anomalies will take place that would baffle us, were too much stress laid upon the items of the proof, individually.

Following the order of M. Capuron, we are led first to the proof proposed by Ploucquet, which we cannot state better than in our author's own words.—P. 392.

“The statical experiment of the lungs consists in first weighing the entire fœtus in a balance, before opening the body; then weighing the lungs alone, or separate from their appendages, and deducting the proportion between their proper weight and that of the entire body. It is certain that this proportion cannot be the same before and after respiration; for we have already seen that the immediate consequence of this function is not only to expand the lungs, but also to circulate the blood [through them] which, in the unborn fœtus, returned to the placenta. This is what constitutes, properly speaking, the change from fœtal or vegetative to pulmonary or animal life. Consequently, the lungs must receive a greater quantity of blood in the infant that has respired; and they must therefore acquire a greater absolute weight, relative to that of the whole body.”

Upon this foundation Professor Ploucquet, of Tubingen, brought forward his proposed test as to the question of respiration having taken place or not in new-born infants. This test has been but lately known to the British Profession, and we do not recollect any case in the annals of our judiciary proceedings respecting child-murder in which it has been noticed. The fact is, that M. Ploucquet came forward with his discovery so far prematurely, that when he first promulgated it, he was furnished with no more than three examples of its application to experiment.* These, it is true, were favourable, at least, if not even satisfactory, as far as they went; but the very basis of this test must necessarily be the result of multiplied investigations as to the weight of particular bodies, under great diversity of circumstances. Since then, experiments have been made upon a scale of some magnitude abroad, from which the conclusions have not been

* *Nova Docimasia Pulmonaris, &c.* Tubing. 1782,

so favourable as we should, *à priori*, have anticipated; for as to the truth of the changes on which the test is founded, there cannot be a doubt.

With a statement of some of these investigations we have been furnished by Dr. Hutchinson*; but their results are so remarkably at variance with each other, that we are not willing to subscribe an unqualified acquiescence. We have but little faith in French accuracy; and are the more inclined to doubt in the present instance, because, as far as we have been able to push the investigation ourselves, the results have corresponded with the *principle* of Ploucquet's anticipations.

The fact upon which Ploucquet set out, was that by respiration the absolute weight of the lungs was doubled. He found, that in the case of non-respiration the lungs weighing as one to seventy, for the whole weight of the body, became, by the changes connected with respiration, as two to seventy, or one to thirty-five. Now, as the whole weight of a child is by no means always the same, as the lungs do not strictly follow the variations in size, fatness, &c. of the body, discrepancies must be looked for—and Ploucquet, being aware of this, dwelt on the necessity of making numerous experiments, in order to establish a scale of weights applicable to infants who had not respired, to those who had, and to various periods of gestation at which they might come into the world, as well as difference in the weight of different bodies. This has never been done in our country, and we should not take upon foreign authority, what we can ascertain for ourselves. We have strong analogies to discountenance such confidence, witness the cases of Cæsarean section, and premature labour, which belong to the class of subjects we are now treating of; and we could adduce others equally applicable. The test of Ploucquet, we insist, should always be made along with the hydrostatic experiment; and though we may not find (to a few drachms, probably) the precise result of either state, that is, of collapse or respiratory dilatation, yet an approach to $\frac{1}{70}$, or to $\frac{1}{35}$, will either confirm us in our opinion as to the fact of respiration having taken place, or lead us to give an accused person the benefit of our inability to draw a positive conclusion.

M. Capuron admits the utility of the proposition as a confirmatory circumstance, particularly when the subject is born at the full term—if lungs that are buoyant owe their increased bulk and diminished spec. grav. to respiration, and not to inflation by other means—where lungs that have respired sink from scirrhus, &c.

* Dissertation on Infanticide.

Another method of trying the state of the lungs has been proposed by Daniel, and is probably less known than the former. It consists in the displacement of water, on plunging the lungs into a vessel of that fluid. It is a principle in hydrostatics, that a solid body placed in a fluid displaces a quantity equal to its bulk. Now, as lungs in a state of collapse are of smaller dimensions than those that are dilated by respiration, they will displace a smaller bulk of water. It is therefore proposed to apply a graduated scale to the vessel containing the water, by which the quantity displaced can be accurately measured by the rising of the surface. To do this will require some nicety in the operation. Many experiments must be made with lungs taken from subjects in different authenticated states, and in the same vessel, with the same scale adapted to each other. Thus it may be possible to arrive at such a degree of, or approach to accuracy, as to be able to conclude, from merely placing the lungs in the vessel, and marking the change in the graduated scale, whether inflation has taken place. To sink lungs distended by air, a silver thread basket is proposed, whose displacing power is taken into account, in which the lungs in either state may be placed. But this would still prove dilatation only, and not that by respiration.

The old hydrostatic proof is simply the sinking or swimming of the lungs in water. The fact was known to Galen,* but no application of it was made to any useful purpose till about the year 1660. At first it was considered as conclusive as the sinking or swimming of a suspected witch in a mill-pond, and was long as indiscriminately received in all cases wherein it was resorted to. But, at length, it was discovered to be occasionally inapplicable — probably from some experiments having been made on subjects whose history was accurately known; and in which the results were not according to the supposed law of nature. Thus we find, among the objections urged against the proof, that in children who were known to have died in utero, the lungs were found buoyant, while, in some that had respired, they were found to sink when placed in water. Now, it must be confessed, that however rare these *irregular* phenomena may be, yet if they do occur, they bring very unwelcome cause for considering whether a favourite and easy mode of solving a troublesome problem can with propriety be persevered in. We shall merely remark, that the facility of this investigation became exceedingly troubled by objections and difficulties; so that (as medical Practitioners get nothing by being puzzled with cross questions in a court

* De Usu Partium.

of justice) the late practice in this country has very generally been to have nothing to do with this "confounded" docimasia — nor to attempt the performance of it, which is very troublesome, rather tedious, and of no profit whatever. Forensic medicine forms no part of professional education in Great Britain. No questions are asked about it at the college; and as for courts of justice, they merely ask for the sake of information, and must put up with what we choose to afford them. The docimasia has been of late, therefore, voted "an absurdity," and declared to be "exploded."*

But in spite of all this, the proof is neither absurd nor exploded; and we will venture to assure such of our brethren as may have adopted this convenient notion, that they will have yet to act in opposition to it; and go through the ceremony of the docimasia, not as heretofore perhaps, but by a tenfold more careful and minute process. Objections have been urged against the hydrostatic test, which, in some instances, may be valid; but as to their general application, we hold that they have been fully answered; and that their just importance is established, and intelligible on the part of those whose object is truth, and not convenience. Into these objections we shall now follow M. Capuron, and with his aid and that of others, endeavour to set them in their proper light, with all possible brevity.

The first we shall notice is the allegation that *an infant may respire before it is born*. This does not rest on any quibbling construction of the word *born* — for it has been roundly asserted, that a child may respire *in utero*, closed up in the womb, enveloped in membranes, and surrounded by fluid! — that in such a situation it has been heard to cry — nay, even to talk! Livy tells us of state occasions on which this took place on the part of a child in the womb, and likewise of an ox. Derham sent a long story to the Royal Society about an ill-tempered brat that kept up a querulous disturbance of this sort for several weeks; and other stories of the like nature are to be found in authors. We were very well contented to object to them all on the ground of their want of solid proof in the manner of communicating them, rather than on our own persuasion as to physical impossibility, &c. — but another history of the same sort has been imported

* Such expressions have been repeatedly made use of as excuses for not having examined the bodies of new-born infants in cases of alleged *infanticide*. Indeed, a newspaper report of assize proceeding last spring makes a learned judge state this opinion to a grand jury as matter of congratulation.

from Dantzig, and is inserted in a most respectable medical journal.* We hardly know what to say as to this new story. That it has overturned our incredulity, would be confessing what is not exactly the case — and to say that it wants confirmation, would not, perhaps, be respectful. We shall therefore return to the subject, as if we had not met with this communication.

M. Capuron decidedly discourages the belief as to crying in utero, even on the analogy of the chick in the egg: nor does he consider it by any means clear, that respiration has taken place even after the rupture of the membranes, when the mouth and nostrils of the foetus are placed over the passages by which the air of the atmosphere could alone reach them. But to cut the matter short, we shall admit this as *the* possible way in which respiration may take place before birth; and having done so, the objection resolves itself into this. The child has respired before birth — therefore it was a face presentation — and the probability is against the occurrence in an unassisted delivery.† In six cases of this sort, where, after the escape of the liquor amnii, the mouth and nostrils presented themselves, first at the orifice of the uterus, and subsequently at that of the vagina, M. Capuron neither observed respiration nor heard cries during the progress of parturition.

We must admit the fact of respiration taking place after the head, and before any other part of the body is born — though it is not likely to be more than partial. Of partial respiration we shall have to speak again; but in these circumstances the child may die, or may be destroyed; and it may be of great importance where a woman states that the child did perish in transitu, and partial dilatation of the lungs is discovered.

M. Capuron takes leave of this objection by propounding a difficulty which he makes no attempt to solve. He states that in footling cases he had repeatedly observed forcible contraction and dilatation of the thorax, with alternate elevation and depression of the shoulders, while the head was yet in the pelvis, and he had introduced neither fingers nor “forceps” to bring it down. By the way of evading this, we should conclude that the head only remained. The shoulders, therefore, having passed, must have caused a dilatation capable, perhaps, of admitting some air. But may not the muscles

* Edinburgh Medical and Surgical Journal for Oct. 1822, p. 50.

† Solitary delivery is almost a *sine qua non* in the occurrence of infanticide — at least, in such cases as depend on medical investigation for proof.

of respiration be set to work before air can be inspired, as well as continue to heave in accidental cases of suffocation? In these instances, it is possible that the placenta may be detached from its adhesion to the uterus, or the circulation in the cord be impeded, while the thorax, being released from pressure, may be at some degree of liberty to dilate the cavities in which the lungs are urged to expand, though yet in vain. "We have always," he says, "lost the child in these cases when the head could not be quickly disengaged." This fact certainly favours the surmise just thrown out, and M. C. does not tell us in what state he found the lungs in any of these fatal cases, whether they contained air or not.

The second objection noticed by our author is, *that putrefaction, artificial insufflation, and emphysema of the lungs, may render them buoyant in water, though the infant has never respired.* In this way of stating it, M. Capuron has clubbed three distinct articles together. The first we might dismiss in very few words, by saying, that as we do not require to place lungs in water in order to ascertain the presence of putrefaction, the existence of that state is good reason for declining to investigate the fact as to respiration by the pulmonary test. We can only expect the results we have in view where the lungs are sound and fresh. But we are not at liberty to pronounce that they are putrid, because the surface or other parts of the body may be in that state. It appears that, with the exception of the bones, the lungs are the last organs in the body that undergo the process of decomposition. They have been found *experimentable*, when other parts have been in the most decayed and inapplicable state. But, admitting that the lungs have actually become putrid, and are consequently possessed of less spec. grav. than water, to what does it amount as an objection to the validity of the hydrostatic test when *duly* made? Merely to a caution as to the circumstances under which we are to perform the experiment.

M. Capuron quotes Schmidt as an authority for the statement just made respecting the slow process of putrefaction in the lungs; and we know that this is an authority in which every confidence can be placed. The deduction was the result of experiment. But even where the development of gaseous matter is already the result of decomposition in the lungs, it seems that we need be at no loss; for the air thus produced may be got rid of by squeezing these organs, and breaking the vesicles containing the gas, after which they will sink. The air that is inhaled by respiration is not to be got rid of—squeeze lungs that are buoyant, *causa respiratoria*, as we will, still they will float.

Marc observes, that as there are other parts of the body, especially the viscera, whose spec. grav. is diminished by putrefaction, they should in such cases be placed in water as well as the lungs, in order to deduce, from the parity of their appearance when in the water with that of the lungs, whether the buoyancy of these be the consequence of putridity or not. Some importance is also to be attached to the crepitating sound which is emitted on cutting into lungs that have respired, which putrefaction will not prevent, but which it will not produce even in those which it may render buoyant. This is a nice experiment, however, requiring care and attention in the performance.

The possibility of dilating and lightening the lungs by artificial insufflation is no longer deniable: Camper has set this question at rest. There are but two cases in which we can be supposed to meet with it—either where attempts have been made to resuscitate a child born in asphyxia, or to throw suspicion on the mother, by blowing into the lungs in order to give an appearance of respiration. In the former case, the mother is most probably the person who has conveyed the air into the lungs, as all births of the nature in question are supposed solitary; if so, the circumstance, if proved, would of necessity be favourable to her; and the latter is an event of very rare occurrence. But how are we to distinguish? It seems that we can rest nothing upon the fact of partial dilatation, for respiration itself may produce only this; and it would also appear, that the assertion that air thus introduced may be squeezed out again is not well founded; but in this way the pulmonary vessels are not enlarged, and the absolute weight of the lungs is not increased. Here the test of Ploucquet would come to our assistance, were it established upon known data; but as it is perhaps premature to say that any given number of drams or grains, that lungs partially inflated may weigh, will warrant a conclusion, we must be contented by saying, that on cutting lungs artificially blown into, there will be no manifestation of that hæmorrhage which will follow in those that have respired; and where the child may have perished through hæmorrhage after respiration has taken place, it will be found that the bloodless state of the vessels is not confined to the lungs, but that the body, in general, partakes of the like vacuity. Marc is decidedly of opinion, that by this sort of dilatation the left lung will not be equally inflated with the right: the reason of this being, that the passage of the left bronchial tube in the infant is more contracted and also larger than the right; in consequence of which, where respiration has been feeble or imperfect, the right lung is

dilated when the left is not, and it has been found that the former has floated when the other has sunk in water. Schmidt admits the truth of the remark where the attempt has been awkwardly made, or where mucus impedes the advance of the air. It is, perhaps, correct to say, that, under the circumstances to which our attention must necessarily be directed, the attempt *must* be awkward; and the presence of mucus a very likely occurrence.

With regard to emphysema in the lungs altering their specific gravity, we shall report M. Capuron's idea of it, and leave it with our readers to receive, reject, modify, apply, or deal with it as they think proper. It seems to have been observed in children who "came into the world feet foremost," and died by the way, and in whom there was no sign of putrefaction. This we have upon the authority of observations made by Chaussier, who "suspected that these lungs had suffered a sort of contusion, and that the blood thrown out, in the course of its alteration, had furnished some air bubbles, and thus augmented the specific lightness of a part of these organs; an explication so much the more probable," says he, "as they were of a violet brown colour," &c.

In the third place, proceeds our author, it has been objected "*that a child may live for some time after birth without respiring, and, consequently, were it to be put to death during that period, the hydrostatic test, instead of detecting the crime, would exculpate the perpetrators.*" When this error occurs, it will be upon what we call the safe side, and is therefore not quite so alarming as if it were to happen the other way. M. Capuron admits the occurrence of the fact upon which the objection is founded, where the thorax or abdomen is deformed — where the child is suddenly expelled from the womb enveloped in the membranes — when it falls into water from the vagina — when the aërial passages are filled with mucus or the liquor amnii — and when it is in a state of great debility, of apoplexy, or asphyxia. We shall not enter into any discussion of the merits of the objection, or the mode of meeting it physiologically. It is almost entirely a conjectural matter; and in our courts of justice we can hardly conceive that a sentence of condemnation will ever be pronounced upon this ground. We should infallibly give such an opinion as would lead to the inference that there *was no proof* of the child being born alive; by which the accusation would fall to the ground.

Fourthly; it has been objected *that the lungs have not always been found to swim, even when the infant was known to have respired.* We are here informed that the cases on record in which this was discovered, were those of subjects

that had not reached the seventh month. Incapacity for breathing seems to have been observed in those immature infants, but attempts, nevertheless, to perform the function, by which some duration of life after coming into the world may have been maintained, though of a very feeble description. In a former part of this article we noticed that infants born under seven months cannot be reared, and here there would seem to be a manifest reason — because they cannot respire.

But there may be causes in the lungs of older fœtuses, and of those who have respired, through which they will sink in water. Such are tumours, scirrhusities, abscesses containing pus, congestions of blood, &c. Inflamed portions of adult lungs will sink in water; and, therefore, such diseases in lungs that have but imperfectly respired, and are of comparatively small dimensions, may carry the whole fabric down along with the diseased portions, or those of altered structure. In such circumstances, stress has been laid upon the necessity of cutting the lungs into portions — separating the healthy from the morbid — and not taking the hydrostatic properties of the latter into account. It is proper, and, indeed, necessary to cut the lungs to pieces in all cases where the experiment is to be made; but where disease is discovered, the better rule will be to consider it as disqualifying the organs altogether from being submitted to experiment.

The last objection noticed by our author implies, *that the fœtus may respire without having lived* — which he condemns as a paradox, and we hesitate not to stigmatise as nonsense. Life may continue for a short period without respiration; but we know nothing of people breathing after they are dead. The objection seems to have been founded on a case, the facts of which were more than questionable; and the subject was one in which the pulmonary test could not properly be applied.

M. Capuron here adverts, in a particular manner, to the importance of distinguishing between the interior or *vegetative* life of the fœtus, and the exterior or perfect life of the child after birth. The difference is decided; but in bringing it forward as matter of guidance, by its visible signs, we only darken completely what was obscure before. The distinction, in reality, exists in the fact of circulation passing or not passing through the lungs. Where it has begun to do so, respiration must have commenced, and where respiration has commenced, the blood will be found to have abandoned the umbilical circuit; then if it does not pass through the lungs but gets directly to the left side of the heart by its former

course, life may continue, but will not last long; and such cases can hardly perplex us in medico-legal research.

M. Capuron seems to consider this last objection as requiring a mixture of physiology and logic to correct it. He supposes an acephalous (or headless) fœtus to be deprived merely of the "*superior*" hemispheres of the brain, and not to die until after respiration — a thing which he very properly admits as possible.* "With what life did they live? What respiration did they perform?" are questions which he proposes, and formally answers.

In a court of justice here, having admitted the fact of life, we should be asked what death they died; and if we could speak to the fact of violence or undue interference, the law would punish the persons concerned without much solicitude as to the paradox in question.†

Another objection has been raised, which should have met with formal notice on the part of our author. It is—that *sometimes one lung will sink when the other floats*. In addition to the answer that has already been made as to partial sinking and swimming in other cases, should it be found in such an instance as the one now referred to, that it is the right lung which is buoyant, and the left which descends, it is precisely what, in many cases of imperfect respiration at birth, physiology would teach us to expect. We mentioned before that in the fœtus, at least, the right bronchial tube is of greater diameter, shorter in length, and more direct in its course than the left; consequently when air is not introduced with sufficient vigour to dilate both lungs, or either of them fully, the right stands more in the way of partial inhalation than the left.‡

It now remains to make the application of the preceding discussions. With regard to the importance of pulmonary investigations, we would take the opportunity of saying that they are of the greatest consequence; — that not only should they never be omitted, where they are *performable*, but that they require great care and deliberation in the performance; — that without them we can arrive at no conclusion; — that any of them taken singly cannot warrant conclusions of a positive nature, while the inferences deducible from due performance of the whole will receive, and

* This sort of occurrence (which is not very rare) favours the idea of the great bulk of the brain being an appendix to the essential organs contained near the base of the cerebral mass.

† See Smith, *Principles of For. Med.* page 372, (note) for a case to the purpose; and also page 66 of our former Number.

‡ See Portal, *Mémoires de l'Acad. Roy. de Sciences*, 1769; and Denman's *Med. Com.* vol. i.

therefore *exact* confirmation from attention to other circumstances; and that there is an order, in which the steps of this process should be pursued, without observing which it must be baffled. A Practitioner may probably consider himself safe in giving no opinion, and charging this to the account of obstacles in the subject; but let him be aware that counsel may require from him a statement of these obstacles, and that his statements may be submitted to the consideration of others of his own profession.

Having ascertained that the child has respired, M. Capuron considers it a matter of no great difficulty to determine *how long* it has lived after birth; the state of the skin, of the umbilical cord, of the stomach, intestines, and bladder, being all that requires attention—but this point (which is in our estimation merely subordinate) is vaguely stated. “How long,” is evidently a term denoting some definite admeasurement of time, and in the case in question, may be supposed to estimate hours, at least, if not days. The whole extent, however, to which we are supposed to carry our opinions, is, whether the child died immediately, or (in other words) in a few minutes after birth, or before the whole of the changes in its economy, consequent to the separation from its uterine dependencies, have taken place. The solution of this question will be easy to the Practitioner, who knows the ordinary state of new-born infants. In ascertaining also, whether an infant is recently dead, or has been dead some time, the general rules of judging in other instances will be applicable here, keeping in mind the peculiarities which belong to a *foetus* that has been dead some time in utero. We must, however, follow M. C. in pointing attention to the importance of examining into these circumstances with great care, where the fundamental step in the accusation of a woman, is to reconcile the state of a foetal corpse with that of her own person, as referring to signs of delivery. Thus, if a woman be found to have borne a child within a few hours, and one is submitted to our inspection, that has all the marks of having been dead many days, we should hardly venture to conclude that she has borne *that child*, unless it exhibits signs of having died *in utero*. On the other hand should we, on examination of a *female* accused of concealing the birth of her infant, be unable to discover the indicia of delivery, and a *foetus*, that evidently perished *soon* (in the applicable acceptation of the word) after birth, but in a fresh and recent state, be produced, the same conclusion would be the safe, if not always the right one. In such examinations, however, inquiry should be made into the circumstances and situation in

which the body has been found, as there are some which hasten the process of putrefaction, and others that retard it.

M. Capuron proceeds to inquire how the manner of the infant's death is to be ascertained, where there are no manifest signs of injury? The only resource here is, to seek for signs of death, by the omission of those attentions already alluded to*. It is for us to find the fact; and for justice to deal with the intent, which the law lays down, as implied in cases of concealment.

He sums up the "dissertation" in a concise and clear manner, which (notwithstanding the length of this article) we shall insert without abridgement.

1. "To establish the commission of infanticide before birth, which is identically abortion, it is requisite to prove the woman to have been pregnant with a living fœtus; to have voluntarily exposed herself to the influence of causes of miscarriage, whether general or local; and these causes to have produced their effect.

2. "To establish the same crime committed during the birth of the child, it must exhibit marks of injury in its body, and these marks must be different from those of the process of parturition, as well as every other arising from natural or spontaneous causes.

3. "To prove infanticide committed after birth, it must first be shown that the child was born alive, well formed, free from disease, mature and viable;† consequently that it has fully respired, therefore the death must have been caused by some criminal omission, or some deadly manœuvre.

4. "To prove the life or respiration of the infant after birth, attention must be paid to the anatomical marks found in the breast and abdomen, in the lungs and pulmonary vessels, urinary bladder, umbilical cord, arterial canal, foramen ovale, and venous duct; the lungs must be submitted to the hydrostatic proof, of which the superiority over all others is beyond all question.‡ For this purpose, however, the lungs must not be in an advanced state of putrefaction; there must have been no insufflation, and we must neither *suppose, presume, nor suspect*,|| the commencement of respiration before birth, or during its progress.

5. "Neither the hydrostatic test of the lungs, nor any other, can certainly or positively establish the fact of respiration, where this function has been obscurely performed, as in asphyxia, extreme weakness, or apparent death of a new-born infant. Whence it

* Page 156 of our last Number.

† M. Capuron is here incorrect in the use of his adopted terms. Mature implies viable, but viable may not be mature. See page 63 of our former Number. "Mature or viable," would be the proper reading.

‡ Yet these others must be taken into account.

|| Sic in originale.

follows that the result of these proofs must be favourable to those suspected or accused of infanticide."

We have now arrived at the third and last part of the work, which comprises instructions as to the manner of examining the foetus, and forming observations and reports to be laid before tribunals. With the latter, we can have but little to do in this country. Those who possess, or may be induced to purchase the work, will find it of some advantage to look over them; for although our testimony and opinions are generally given and received in the way of question and answer, *viva voce*, yet we must on all occasions of investigation, take notes of the appearance that present themselves; and we may indeed have to extend our labours in the shape of a written report. For this we have no prescribed forms to observe, those being undoubtedly the best which convey the simplest and clearest statement of the matters concerned. In doing this, however, a man may display talent, or evince ignorance and incapacity; and it is always to be expected of a person of reputed education, that he should display his knowledge in correct and suitable language, as well as in appropriate order.

The directions for the survey and dissection of the foetus, are excellent. We could not abridge them, and they would make too great a bulk for our finale. We may console our readers, however, by referring them to the very perfect and minute instructions on this point, to be found in the dissertation of Dr. Hutchinson.

We now consign the work of M. Capuron to a conspicuous situation on our shelf, as worthy of frequent consultation, and entitled to much confidence. Without saying that it leaves nothing to be supplied, or scarcely any thing to be corrected, we are satisfied (as far as our researches in medico-legal lore have hitherto led us — and we may boast of at least some *length*) that no one work has done greater justice to the department which is here treated of — with industry, fidelity, and perspicuity.

II.

Researches on the Pathological Anatomy of the Digestive Canal, considered in its Sub-diaphragmatic Portion. By M. ANDRAL, Jun. M.D.

THE following memoir was read at the *Académie Royale de Médecine*, in the sittings of March and April 1822, and received the highest commendation from Messieurs Chaussier and Clocquet, who were

deputed to render some account of it to that learned body. To us the pathological observations contained in it appear to be possessed of the highest interest, and seem evidently written by one who must have paid very considerable attention to the anatomy of the body under health as well as under disease. We, therefore, consider it richly to deserve a place in the REPOSITORY.

ART. I.—*Anatomical characters of inflammation of the digestive tube.*

The digestive canal, inflamed, when viewed externally, is generally contracted, and appears injected. Contraction of the intestines, however, sometimes exists independently of inflammation. It is not unfrequent, for example, to find the pyloric portion of the stomach strongly contracted and reduced to the size of a small intestine, although no mark of inflammation can be discovered on its internal surface: we have also frequently seen the great intestine strongly and universally contracted from the cæcum to the rectum, and yet no derangement in its mucous coat. The injection, when seen externally, is sometimes seated in the sub-peritoneal tissue only, more commonly it has its seat in the cellular layer, situated between the mucous and muscular coats, but in no case can the external appearance show the state of the mucous coat. It has frequently happened to us, to find this membrane evidently inflamed, disorganized, and ulcerated, in portions of the intestines, which, when seen and examined externally, had been regarded as healthy. An important error may therefore be committed, if, as is sometimes done, we pretend to judge of the healthy or morbid condition of the intestine by the appearance of its external surface.

If we examine its internal surface, we find it present a multitude of different aspects: an uniform red colour is often observed of a greater or less extent, which varies from the most intense vermilion to the deepest brown. Sometimes this redness loses itself by little and little, as is observed more particularly in the small intestine; whilst at other times it terminates abruptly, as is frequently observed at the union of the pyloric portion of the stomach with the splenic, at the junction of the stomach and duodenum, and at the ileo-cæcal valve, the superior surface of which is often found very red, whilst the inferior is very white, and *vice versa*. The valvulæ of the small intestine are commonly of a much deeper red than the intervals which separate them; but if they are unfolded, this more intense colour is observed to disappear: at other times there exist, in several places, red or brown patches of a round or irregular figure, between which the internal surface of the intestine is nearly white: these patches seem to form so many isolated phlegmasiæ. It is not uncommon, in place of an uniform red tint, to meet with numerous arborescent appearances, occasioned by a strong injection of the vessels, and their numerous anastomoses; around these vessels a crowd of small red points frequently appear, which seem to be sometimes owing to a more violent partial injection, and occasionally to a slight circumscribed sanguineous extravasation. Finally, pimples, pustules, and

fungus excrescences of different forms and sizes, sometimes arise from the internal surface of the intestine.

It is not sufficient, however, to have opened the intestinal canal, and to have observed, with more or less attention, the state of the internal surface: the mucous surface must be separated from the subjacent tissues; must be studied when thus separated; and the lesions which the other tunics have undergone, be afterwards investigated. This is the manner in which we shall proceed at present.

If we open the stomach, or any portion of the intestine of a living animal, we find that, except during digestion, the mucous membrane is every where of a white or rosy white colour; through its tissue, which is perfectly transparent, the subjacent laminated tissue may be discerned: it is commonly but triflingly injected; but it becomes more so if the animal struggles much. During the process of chymification, the mucous coat of the stomach is commonly of a deepish red colour: in proportion as the chyme passes forward in the intestines, their mucous coat becomes vascular like that of the stomach. The same colour is observed in the portions of the great intestine, where the fecal matters accumulate and sojourn. Thus, in several rabbits where we have had occasion to examine the digestive tube, we have found the mucous coat of their enormous cæcum, which is always filled with a great quantity of fæces, of a lively red.

With regard to thickness, the mucous membrane of the digestive passages presents great varieties in its different parts. In the stomach it is at its *maximum*; it is thinner in the small intestines; and still more so in the cæcum and colon, where it only forms a sort of very thin cuticle.

Its consistence is every where in a direct ratio to its thickness: thus, in the stomach it can easily be detached in large flaps, and may be pulled in different directions without tearing, whilst in the great intestine it tears on the least effort.

Its adhesion to the subjacent laminated tissue is by no means considerable in the stomach. In the duodenum it can only be separated with great difficulty: in the remainder of the small intestine, the adhesion of the mucous coat is more intimate where it covers the valvule, than in the intervals between them; in the great intestine this adhesion is tolerably strong.

Such has appeared to us the mucous membrane of the digestive canal in its physiological state. When attacked with inflammation, it presents numerous modifications in its colour, thickness, consistence, texture, and frequently in the state of its follicles: the liquids which cover its surface, also undergo remarkable changes with respect to quantity and quality.

The first effect of inflammation is to occasion a greater flow of blood into the part of the mucous coat which is attacked by it: when detached under such circumstances, and held between the eye and the light, this membrane sometimes appears overrun by numerous vascular networks; whilst at other times it presents an uniform red

tint, and completely intercepts the passage of the luminous rays. This latter condition indicates a more considerable afflux of blood: the smallest vascular ramifications are filled with it, and are so closely compacted that no interval exists between them. Anatomists; in their artificial injections, can easily give this uniform red tint to the tissues, and especially to those which are membranous. In place of presenting a red colour, the mucous membrane, when in an inflamed state, is frequently of a *more or less deep brown colour*. This tint does not depend upon the duration of the inflammation: it is sometimes observed to supervene in a very short space of time when the inflammation is violent, at which times it seems to announce the commencement of the disorganization of the membrane. Carry into the stomach of an animal some strong corrosive poison, such as corrosive sublimate, arsenic, sugar of lead, &c. and you will find in a very short space of time, an hour for example, the mucous membrane of a cherry red in several parts, whilst in others it is of a brownish gray. Sometimes this latter colour exists alone. Professor Orfila found that the mucous coat of the stomach was of a very deep reddish brown, in animals which had swallowed euphorbium about twenty-four hours previously. In man, the mucous coat of the stomach frequently presents the same tint, whilst at the same time it is softened.

It results from these facts, that the brown colour of the mucous membrane of the digestive canal is a product of its inflammation, and that it may equally manifest itself, in violent inflammations, which occasion, in a very short space of time, the disorganization of the tissue with which they are placed in contact, and in chronic, which in process of time produce the same result.

At the same time that the mucous coat becomes injected with blood, it must be necessarily thickened. This thickening, like the inflammation which gave it birth, may be general or circumscribed. It is particularly well marked in chronic inflammations: we have oftentimes seen, in cases of chronic diarrhœa, the mucous membrane of the colon of a thickness equal to that of the four tunics united, in their ordinary state.

The circumscribed thickening of the mucous coat is tolerably frequent: it appears under the form of round or oblong patches, projecting above the remainder of the internal surface of the canal, to the extent of two or three lines. The surface of these patches is glossy and rugous: the mucous membrane which surrounds them is sometimes perfectly white and transparent, sometimes more or less strongly injected. Their dimensions are variable: the greatest which we have seen, were at least of the size of a crown piece; the smallest were about the size of a shilling. These partial thickenings of the mucous coat are very rare in the stomach; more common in the great intestine, especially in the transverse colon, and more common still in the inferior part of the small intestine. Sometimes one only of a greater or smaller size is met with: at other times they are found to exist in very great numbers. With respect to colour, two species may be admitted: some are red,

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and appear to be of recent formation: whilst others are of a white, more faded than the rest of the mucous coat, and appear to be the result of an old inflammation, the other signs of which have disappeared: it is a sort of termination by induration.

When the thickening of the mucous tunic is considerable, it preserves, in the greater number of cases, its consistence, or even acquires a greater density; but at other times we find this membrane of its ordinary thickness, and singularly softened.

Pathological observations and experiments made on living animals, show that softening of the mucous coat may take place in a very short time, provided the inflammation be very violent. Half an hour after some grains of corrosive sublimate had been injected into the stomach of a dog, Mr. Brodie found that the mucous coat of the organ had undergone a remarkable softening.

In this condition it is impossible to detach the mucous tunic under the form of membrane; it is demi-liquid, and the slightest rubbing with the scalpel, or friction with the finger, reduces it into a sort of pulp or reddish *bouillie*.

A similar softening is sometimes observed in mucous membranes, which are perfectly white. Must not this condition, like the white circumscribed patches of which we have already spoken, be considered as the sequel of an old inflammation? We shall see farther on that this pulpy sort of condition of the mucous coat, with whiteness of its tissue, is one of the lesions which the great intestine presents, in cases of chronic diarrhœa.

(To be continued.)

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

- I. *Hunterian Oration, delivered before the Members in the Theatre of the Royal College of Surgeons, on the 14th of February, 1823.* By Sir WILLIAM BLIZARD, F.R.S., President of the Royal College of Surgeons, and Surgeon to the London Hospital.

THE learned President commenced his oration before a crowded audience, by making some general observations on the objects for which the Hunterian oration was instituted, and on the benevolent nature of the science of surgery, to the improvement of which the celebrated Hunter had so considerably contributed, not only by his own discoveries, but by awakening the spirit of research in others. After alluding to the Hunterian collection as a grand depository of every thing relating to animal knowledge, and as a magnificent conductor to others of the spirit of Hunter,

the exertions of the Court of Examiners were much lauded, and the utility of their examinations demonstrated by a reference to the number of scientific Surgeons now practising in every part of the British empire. The great desire of the College for the improvement of science was next adverted to, and their intention to publish their Transactions, their endeavours to collect an extensive library, and to form a descriptive catalogue of the Museum, noticed.

The orator then proceeded, in very proper and vehement language, to inveigh against the conduct of those who openly professed empiricism; and feelingly depicted the miseries to humanity of which they were the occasion. The College, he observed, had frequently been censured for not making use of the power which was supposed to be vested in them for the abolition of charlatantry; whilst the powers they possessed were perfectly insufficient for that purpose without some new legislative enactment: he trusted, however, that British senators would not suffer this disgraceful defect to exist much longer.

After observing that the proper objects for honourable notice in a Hunterian oration are the memory of men of distinguished talent, of contributors to the Transactions, of men who have been benefactors to the College, &c., and that those individuals who have filled any important office in the College, but from corporeal failing have been necessitated to recede from their duties, are worthy of particular honour; the veteran orator proceeded to notice, in the most laudatory manner, the benefits which science had derived from the exertions of the late Sir Joseph Banks, the man, as the celebrated Humboldt expressed it, who, during the many schisms which agitated Europe, endeavoured to bind together the learned of all nations. From the consideration of the valuable endeavours of this philosopher, he proceeded to pass some eloquent and well merited eulogiums on the following distinguished members of the College, who, within the last few years, have gone to

“ That undiscover'd country, from whose bourn
No traveller returns :”

viz. the late Sir Charles Blicke, Sir James Earle, Mr. Long, Mr. Keate, Professor Wilson, Mr. Chandler, Mr. Hey, and Dr. Jenner; names well known in the annals of science, the last of whom was educated for a Surgeon, and was a pupil of Hunter's, and performed many experiments for him, as detailed in his work on the Animal Economy. The mention of the name of Jenner, and the important discovery of which he was the author, gave occasion for the observation, that the confidence of the College in the power of vaccination to exterminate the small-pox remained unshaken, and that they who inoculated for this disorder were not only the guilty causes of death, but a disgrace to their profession and to mankind.

The orator next passed on to the enumeration of the different contributions to science of the celebrated Hunter; and, after observing that no naturalist ever would think of writing without having recourse to the Hunterian collection, and that Hunter's works would form very excellent elementary exercises if reduced into an aphoristic form, he earnestly called upon members to do every thing for the honour and advancement of Surgery, an object for which the Hunterian oration was instituted; and proceeded to notice, in the most eulogistic terms, the conduct of our present most gracious Sovereign, the liberal patron of the arts, and the illustrious benefactor of the College, who had graciously condescended to sit for his bust, which was then placed in the theatre of the College. The veteran orator concluded his eloquent harangue in the following words, circumstances permitting him to terminate his oration in the same language as that which he adopted when he before delivered the Hunterian oration; —

"The impression upon your minds of the imperfections of this commemorative performance, will, I hope, be softened by the consideration, that, upon the next occasion, the intention of the founders of the Hunterian oration, and the resources of learning, science, and talent, in the College, will be adequately expressed by my distinguished successor Mr. Cline."

II. *Remarkable Case of Wounded Intestine.* By the BARON D. J. LARREY, Surgeon-in-Chief to the Hôpital de la Garde Royale, &c. &c.*

Jean-Baptiste Jolin, aged twenty-three years, fusileer in the sixth regiment of the Guard, whilst playing on the 27th of April, 1820, with one of his comrades, in the fields near to the barracks, at Courbevoie, accidentally fell upon the point of his sabre, which he was holding drawn in his hand, and deeply wounded the lower belly. He was carried to Puteau, a neighbouring village, where Dr. Carré afforded him the first assistance.

"This soldier," said M. Carré, in a letter which he wrote me after the cure of the patient, "had a transversal wound, about fifteen lines in extent, at the right lateral and inferior part of the belly, through which a considerable portion of the *intestinum ileum* protruded: this was already tamed. He was affected with nausea without vomiting. I examined the portion of protruded intestine, and discovered a somewhat considerable wound, which gave issue to some liquid stercoraceous matter: this induced me to apply a suture to it immediately, which returned along with the intestine into the cavity of the abdomen: not being provided with thread and needles, a female lent me hers, furnished with a piece of black thread. He was then dressed and sent to the *Hôpital de la Garde*."

During the journey, which was very fatiguing, he vomited several times copiously, and had an evacuation mixed with blood.

On his arrival at Gros Caillou, the Surgeon on duty removed the dressing, and observing a portion of small intestine inflated, which presented no appearance of any solution of continuity, he returned it into the cavity of the abdomen without much difficulty. The patient, being in a state of extreme weakness, could give him no information of what had passed: so that the Surgeon, observing nothing particular in the portion of misplaced intestine, felt satisfied with fulfilling the indication which presented itself to his eyes, by the operation of the taxis: he afterwards applied a retentive dressing, and prescribed mucilaginous drinks and emollient glysters: the patient, however, experienced no relief: he passed the remainder of the night in a continual state of anxiety, and was several times attacked with vomiting of a bilious matter, accompanied with violent colic pains, tenesmus, and scanty alvine evacuations, mixed with blood.

At my visit, in the morning, I inspected the wound, but there was no issue of any of the contents of the abdomen. I could learn nothing from the patient; all that he said was, that the Surgeon who had dressed him at Puteau, had asked a female, who was present at the operation, for a needle and thread which he saw in her hand; but that he did not know what use they made of it, as he felt nothing. Conformably to my precepts, however, I cleared the wound in the integuments, and the opening made in the aponeurosis of the external oblique muscle, and discovered by that means through a considerable bloody *foyer*, seated behind the wound and in the peritoneal cavity, several convolutions of intestines which had already contracted adhesions to each other. Although the symptoms of internal strangulation continued, I durst not tear the adhesions in order to search for the contracted portion of the viscus, for fear of extending the extravasation, and opening afresh the arterial vessels which might be situated at

* Recueil de Mémoires de Chirurgie, par le Baron D. J. Larrey, p. 261.

the points of union. I therefore contented myself with evacuating the blood effused into the species of reservoir, and dressed the wound with lint spread with storax ointment, charpie, and an appropriate bandage. A small branch of the lumbar artery having been opened in the incision, I tied it, and the hemorrhage ceased.

The pulse was small and quick, and the countenance pale: the eye dull and watery, and the extremities were cold: he had frequent nausea and vomiting at very short intervals, followed by scanty alvine evacuations mixed with blood, with colic pains, and meteorismus.

This alarming state gave me considerable uneasiness, and I despaired of being able to extricate him from his perilous situation: before again attempting, however, to discover the strangulated portion of intestine, I was desirous of employing cupping, which, in cases of spontaneous *volvulus*, had succeeded miraculously.*

Scarcely had I applied the three or four first glasses, when the *meteorismus* sensibly diminished: the patient experienced relief, and he had, a few moments afterwards, evacuations *per anum* of bilious matter, mixed with clots of blackish blood.

The application of this derivative topic was repeated, so as to cover the whole surface of the abdomen.

The cupping I followed up by embrocations of camphorated oil, by gently emollient and anodyne cataplasms, and by glysters of the same nature, which were still accompanied with scanty bilious dejections, streaked with black blood.

The following night was tolerably tranquil; but the next morning the colic pains returned with violence, and were accompanied with nausea and some vomiting.

The at least momentary success which I had obtained from cupping, induced me again to have recourse to it. I also insisted upon the use of emollient embrocations, of mucilaginous and anodyne drinks, ice-cold, and especially of emollient glysters.

A sensible amelioration was again obtained: all the symptoms entirely disappeared, and the patient slept for eight or ten hours; they again returned, however, and nearly at the same hour. Whilst they continued, *meteorismus* came on: the alvine evacuations were suppressed, the urine became scanty and limpid: the colic pains were more or less violent, and the pulse experienced similar variations. In short, I have seen him several times in such great danger that I expected he would have died.

After having frequently repeated, however, the application of cupping, both dry and with the scarificator, and having insisted upon the use of sedatives and mild purgatives, administered more especially in glysters, I obtained such a sensible amelioration, that I began to have hopes of saving the patient. In order to produce more speedily this fortunate result, I applied, over the whole surface of the abdomen, a blister, composed of equal parts of camphor and cantharides, passed through the steam of boiling water. On the night of the eleventh day from the accident, the disease terminated by two phlegmonous swellings, which formed at the parotids. In fact, from that moment, all the inflammatory symptoms of the abdomen disappeared almost at once; and the patient had, in the day of the thirteenth, copious evacuations of stercoraceous matter, doubtless produced by some grains of calomel, which I had administered on the preceding evening, in a mixture of castor oil and syrup of endive. I encouraged the suppuration of the parotid tumours, by means of inatulating cataplasms; and as soon as fluctuation was manifest, I applied the

* I could relate several successful cases, and I have only to regret, that the idea did not strike me of making use of it in the colic of Madrid.

caustic potass, which accelerated the suppurative process, and gave issue to a large quantity of purulent matter, which had formed in the cellular tissue of the regions which I have mentioned. This salutary crisis was immediately followed by the exit, through the wound of the belly, of a ligature about three inches and a half in length, composed of a piece of simple black thread, knotted at the end, which first presented itself at the wound, and by which I extracted it in presence of the young Physicians who attended my Lectures on Clinical Surgery, of which Jolin had, that day, been the principal subject.

The unexpected evulsion of this thread proved to me, as the patient had in some measure announced, that a suture of the intestine had been really performed, and it enabled me to account easily for the symptoms which I had observed during the course of this traumatic disease: this last circumstance induced me to write to the Physician who had given the first assistance to the patient, in order to learn from him what had been done at the first dressing: the answer which I received has been given above.

The patient went on improving, and was soon in a state of convalescence, which, however, was long and troublesome.

The abdominal wound cicatrized pretty quickly: all the functions were gradually resumed: he was completely cured before the sixtieth day from the accident, and was discharged from the hospital on the sixty-second.

Every thing leads me to believe, that the adhesions which I at first observed between the convolutions of the wounded intestine, (which in my opinion was the ileum,) were spontaneously removed, in proportion as the peristaltic motion was restored in the intestine—that the causes of irritation were dissipated, and that cicatrization of the intestine had completely taken place.

The nature of the needle, and the mode of suture, contributed considerably to this fortunate termination.

In the article, *Aiguille*, of the *Dictionnaire des Sciences Médicales*, I have observed, that for sutures of the intestines, a common tolerably fine sewing needle is preferable to that which we use for sutures of the integuments. The hemorrhage which took place at first in Jolin, by the external wound, and by the intestinal canal, was produced by the division of a considerable number of small arteries, cut by the wounding instrument in the perietos of the abdomen and intestine. To me, it is also very evident, that the inflammation which had invaded all the membranous viscera of that cavity, was advantageously combated by the reiterated application of cupping, dry and with the scarificator.

Finally; the employment of this therapeutical agent cannot be too strongly recommended in acute phlegmasiæ of the abdomen, as well as in those of the thorax; I am satisfied that they powerfully contributed to the recovery of this patient, whose cure is remarkable.

This soldier was presented before the *Société de Médecine de la Faculté*, and I have seen him several times since that period: he is in the enjoyment of perfect health, and every thing announces that the intestine which had been stitched, has lost its external adhesions, and that it is free and floating in the abdominal cavity, like the other portions of the small intestines. There is a disposition to hernia at the cicatrix, but it is prevented by the application of an elastic bandage.

III. Observations on the Case published by Mr. Liston, Surgeon, Edinburgh, in which he performed an Operation on the Bladder. By ALEX. GEORGE HOME, Esq., House Surgeon to the Royal Infirmary, Edinburgh.

In perusing the Number of "The LONDON MEDICAL REPOSITORY" for November, I observed a paper written by Mr. Liston, wherein he mentions

the removal of a flocculent membrane from the bladder by operation. It is not my intention here to enter far into the merits or demerits of this operation. But "I think it right to give publicity to even the most trifling circumstances, which can throw the least light on so important and instructive a case."—Giles M'Bean, the patient on whom this operation was performed, a man of about sixty years of age, was brought into the hospital on the 12th of last August, at eleven o'clock, forenoon, in consequence of a severe bruise he received from the falling of a newly erected scaffolding, about half an hour previous to admission. He was immediately examined, and it was found that he had lost all power of motion of the lower extremities; but his chief complaint of pain was referred to the right hip and loin, on which part he reported that a plank had struck him. Warm fomentations were immediately ordered to the injured parts, and the bowels opened by an enema. Towards evening he complained of pain in the hypogastric region, with desire, accompanied by total inability of voiding his urine: a common sized flexible catheter was immediately passed into the bladder without the slightest difficulty, and lb. ij. of urine, slightly tinged with blood, were evacuated with considerable relief to the patient. On the morning of the 13th, his chief complaint was, of acute pain of right hip and loin, attended with considerable ecchymosis. Several ounces of blood were removed from the former by scarification and cupping, which immediately relieved the pain. At this time all his feces were passed involuntarily. The patient expressed no desire to make water until evening, when the symptoms recurred as on the preceding night. On passing the catheter into the bladder, it was found that the flow of urine was entirely stopped, and on withdrawing the instrument, the lower opening was closed by a plug of coagulated blood. A large sized silver catheter was immediately had recourse to, which passed into the bladder with perfect ease, but the result was the same as the former. It was now pretty evident that the obstruction was occasioned by a collection of coagulated blood in the bladder; and having heard of several well authenticated cases, where much benefit had been derived from suction employed by adapting a syringe to the outer end of the catheter, I resolved to try it, and by this means removed a considerable quantity of clotted blood. The patient felt relieved—warm fomentations were then applied to the region of the bladder, and an opiate given. On the morning of the 14th, he expressed himself to be much better, and, apparently from the wish of his friends, seemed anxious to go home. Owing to his being removed from the hospital before I could procure his address, all clue to him was lost, until I fortunately saw a continuation of his case in the *MEDICAL REPOSITORY*. I was not a little surprised at seeing it there stated, that some "reddish fluid" had been injected into the bladder, whilst the patient was in the hospital, and more so, when it was hinted, that the fluid was of an "acid nature!"

In the relation of Mr. Liston's case, there seems to be an evident want of good faith, and a marked intention and wish of throwing the whole blame of its unfortunate issue on what took place during the two days, which the patient resided in the Royal Infirmary. On his admission into the Infirmary, it was clear, from the symptoms, that the great and material injury which he had sustained, was in the lumbar spine. There was the seat of pain—the marks of contusion and ecchymosis; and the paralysis of the lower extremities, and the loss of the contractive power of the bladder, were abundant proofs of the nature of the injury. In a case of this kind, I am at a loss to conceive what better means could have been devised than the practice which was adopted, with the indication of relieving the spinal cord, or obviating any increase of symptoms, by local blood-letting on the seat of the injury, and fomentations with the view of relieving

the contusion. Immediately that the retention of urine was ascertained the catheter was introduced, and successfully ; not indeed with violence, but, as may well have been anticipated, with more than usual ease, for here there was neither stricture of the urethra, nor spasmodic contraction of the sphincter vesicæ, but simply paralysis of the bladder, from injury inflicted on the origin of its nerves. When the bladder again filled, the catheter was again had recourse to, and it passed the sphincter and entered the bladder at once, with the same ease it had done before, but not assuredly with the same happy result. The opening of the catheter, on withdrawing it, was choked with blood. I was at no loss to account for this, and at once conceived, that a violence so weighty as to produce injury of the spinal cord, and consequent paraplegia, might well also have induced rupture of vessels, or other injury in an internal part, the kidneys or the bladder. A larger catheter was introduced with equal ease, but with no better success ; and now, in the absence of the visiting Surgeons of the institution, I was not guilty of the folly of injecting into the bladder, already distended, any fluid whatever, either of a "red colour," to increase the redness which already existed from internal hæmorrhage, or "acid," farther to excite the already too much irritated organ ; but, authorized by the successful example of the first Surgeons of Paris and London, I endeavoured by means of the syringe to withdraw the blood which obstructed the neck of the bladder, and prevented the flow of urine. But whether I did right or wrong, it is not so much my intention to contend for, as it is to show that all the subsequent sufferings of this man arose, not from any mal-treatment or neglect to which he was subjected, whilst in the charitable institution to which I have the honour to belong, but from the very nature of the injury which he had suffered by his fall. In fact, the catheter was but four times introduced, always with ease, and always fairly beyond the sphincter. I pledge myself, that there were neither "*sufferings, pokings, or injections,*" and for the accuracy of this, the public journals of the hospital can be referred to. On the third day from the accident, and the day after he left the infirmary, Mr. Liston saw him, introduced the catheter as I had done with ease, and drew off, to the poor man's great relief, "*three pounds of putrid fluid, more resembling blood than urine.*" Even the egotism of the most self-complaisant Practitioner ought hardly, I think, to have led him to take any credit to himself on this account, at the expense of those who had been the day before less successful. To me the rationale of this, as of all that followed, seems very intelligible. The coagulated blood which had obstructed and filled the lower part and neck of the bladder was now dissolved and mingled with the urine ; the whole accordingly, to use Mr. Liston's own words, being "*a putrid fluid, more resembling blood than urine.*" For some days after the urine continued to be successfully drawn off by the catheter, and sometimes even this appears to have been unnecessary : the man being occasionally able to evacuate the bladder by his voluntary efforts ; but still it was remarkable, that "*a great quantity of very putrid slimy matter was always discharged !*" During all this time, while it was evident that the mucous membrane of the bladder, if not also its other coats, were in a morbid condition, when an inflammation of those membranes might fairly be presumed ; it does not appear that any thing was attempted "*by this Surgeon of known activity*" for the poor man's relief, other than the anointing the region of the bladder with a turpentine liniment ; the merits of which, few experienced Practitioners will be disposed to rank higher than any other innocent placebo. The inflammatory action of the bladder was allowed to go on ; and at length, Mr. Liston, on introducing the catheter, met with the same disappointment from a similar, though somewhat different cause, than I had done,—from a cause too, for which I

cannot help retaliating, by observing, that he is more responsible than I was—from the formation of an adventitious membrane, the product of that inflammation which he had neglected! At length, on the 2d of September, *eighteen days* after the patient came under his care, when the man seemed moribund, and the retention could not be relieved, he plunged a bistoury into the bladder, and then seems to have understood for the first time the nature of all this injury which had been going on. I have great respect for the talents of Mr. Liston, as an operative Surgeon; but it would be better for himself and the profession to which he belongs, were he more guarded in his censures on the practice of others, and that he would refrain altogether from his misstatements and misrepresentations.*

Edinburgh, 22d Dec. 1822.

IV. *On the Employment of Oil in Cases of Poisoning by Cantharides.*
By Dr. PALLAS.

Dr. Pallas is of opinion, that the administration of oil in this species of poisoning is dangerous, from the property which it possesses of dissolving the active principle of the cantharides, and by this means of augmenting the danger instead of preventing it. It appears that M. Orfila has made experiments for the purpose of satisfying himself of the truth of M. Pallas's statements. Cantharides were macerated in cold oil, and the oily maceration afterwards administered to dogs, all of which died in a few minutes. We observe, that both in the tables by M. de Salle, to which we had occasion to allude in our last, and in those of Mr. Stowe, oil is recommended in cases of poisoning by cantharides, and we therefore agree with him "that too much publicity cannot be given to so important a fact, in order that the way by that means prevent the fatal accidents which arise from this error."—*Journal de Pharmacie*, Novembre, 1822.

V. *On the Fungous Excrecences which sometimes show themselves after the Falling off of the Umbilical Cord.* By H. M. J. DESRUQUES.
D. M. P.

In those cases where a fungous, conoid tumour, accompanied with a considerable discharge, which sometimes continues for a great length of time, shows itself at the navel, M. Desruelles has found the hydrarg. submurine, sprinkled over the tumour, remove it in a very short period.—*Journal Général de Médecine*, Octobre, 1822.

* It is by no means our wish to admit controversial papers into the *REPOSITORY*; but as a passage of Mr. Liston's case required some explanation from the gentleman who conducted its early treatment, we should be guilty of unfairness were we to deny the admission of Mr. Home's reply into our pages.

The fact appears to be, that the case in question furnishes one of the many instances, that may be found, of the readiness with which the bladder becomes inflamed, when the voluntary nerves which supply it and the surrounding parts are injured at their origins. It also is a proof of the very insidious manner in which such inflammation proceeds to the most unfavourable termination: for, as these nerves are usually, in injuries to the portion of the spine whence they arise, either compressed, or otherwise deranged in their functions, they are incapable of being instrumental to the sensations, or of furnishing many of the more prominent symptoms which generally characterize inflammation of the viscus.

From an attentive consideration of the influence, which injuries of the spine have on the urinary functions, and which it is unnecessary for us at present to explain, we are led to conclude, that both our correspondents are in some degree mistaken. We therefore recommend them to think no more on the subject.—*EDIT.*

VI. *Hunterian Society.*

On Wednesday, February 5th, the anniversary of this Society was held at the Society's room, Aldermanbury, when the following Members were elected Officers for the ensuing year:

President, Benjamin Robinson, M.D. Vice-Presidents, William Babington, M.D. F.R.S.; H. Lidderdale, M.D.; Sir William Blizard, F.R.S.; Benjamin Travers, esq. F.R.S. Treasurer, B. Robinson, M.D. Secretaries, J. T. Conquest, M.D. F.L.S.; William Cooke, esq. Council, Thomas Callaway, esq. W. D. Cordell, esq. John Dunston, esq. F.L.S. H. Greenwood, esq. John Winstone, esq. H. Hawkins, esq. J. C. Knight, esq. Lewis Leese, esq. Eusebius A. Lloyd, esq. J. Miles, esq. B. C. Pierce, M.D. and J. Roberts, esq.

On the following day the Members and friends of the Society dined together at the London Tavern; on which occasion Dr. Robinson took the chair. The report of the progress of the Society, and of the state of its finances, is encouraging.

VII. *The Diseases and Casualties of the Year 1822.*

DISEASES.—Abscess, 82; Apoplexy and Suddenly, 178; Asthma, 799; Bedridden, 1; Cancer, 81; Childbed, 229; Consumption, 3,839; Convulsions, 3,076; Croup, 91; Diarrhoea, 2; Dropsy, 684; Dropsy in the Brain, 417; Dropsy in the Chest, 143; Dysentery, 2; Epilepsy, 1; Eruptive Diseases, 4; Erysipelas, or St. Anthony's Fire, 8; Fever, 1,093; Fever, (Typhus) 57; Fistula, 6; Flux, 13; Gout, 41; Hæmorrhage, 57; Hooping Cough, 750; Hydrophobia, 2; Inflammation, 1,243; Inflammation of the Liver, 71; Insanity, 240; Jaundice, 81; Measles, 695; Miscarriage, 3; Mortification, 399; Old Age and Debility, 1,850; Palsy, 202; Venereal, 14; Rheumatism, 10; Rupture, 44; Scrofula, 28; Small Pox, 712; Sore Throat and Quinsey, 19; Spasm, 42; Stillborn, 673; Stone, 24; Stoppage in the Stomach, 18; Suddenly, 310; Teething, 503; Thrush, 118; Worms, 8.

CASUALTIES.—Broken Limbs, 1; Burnt, 27; Drowned, 97; Excessive Drinking, 4; Executed,* 10; Found Dead, 10; Fractured, 2; Frightened, 4; Killed by falls and several other accidents, 65; Killed by Fighting, 1; Killed by Lightning, 1; Murdered, 2; Poisoned, 2; Scalded, 2; Strangled, 1; Suffocated, 2; Suicides, 35: total 266.

CHRISTENED.—Males, 12,574; Females, 11,726: in all, 24,300.

BURIED.—Males, 9,671; Females, 9,557: in all, 19,228.

Whereof have died, under two years of age, 4,779; Between two and five, 1,771; five and ten, 826; ten and twenty, 631; twenty and thirty, 1,577; thirty and forty, 1,990; forty and fifty, 2,095; fifty and sixty, 1,918; sixty and seventy, 1,600; seventy and eighty, 1,230; eighty and ninety, 666; ninety and a hundred, 144; a hundred, 0; a hundred and one, 0; a hundred and two, 0; a hundred and three, 1.

Decreased in the burials this year, 477.

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

I. *Conspectus Medicinæ Theoreticæ; or a View of the Theory of Medicine.* By the late James Gregory, M.D., formerly Professor of the Theory of Medicine, afterwards of the Practice of Medicine in the University of Edinburgh. In two Parts. Part I. containing

* There have been executed in London and the county of Surrey, 28; of which number 10 only have been reported to be buried within the bills of mortality.

Physiology and Pathology; Part II. containing Therapeutics. Translated from the original Latin. Edin. 1823. 8vo. Pp. 535.

We have been accustomed to peruse with so much pleasure the classical Latinity of the work of which the present is a translation, that it appears divested of half its charms when put into an English version; but to many of those who refer to it for its valuable medical information only, it may not be without its advantages. We are not a little surprised, however, that the translator should have sent it out to the world without adding notes, so as to make it a work containing the existing state of our knowledge on the subjects which it embraces.

II. A Practical Treatise on the Bath Waters, tending to illustrate their beneficial Effects in Chronic Diseases, particularly in Gout, Rheumatism, Paralysis, Lead Colic, Indigestion, Biliary Affections, and Uterine and Cutaneous Diseases; confirmed by Cases: containing likewise a brief Account of the City of Bath, and of Hot Springs. By Joseph Hume Spry, Surgeon, &c. Lond. 1822. 8vo. Pp. 442.

Our readers will be surprised to see another work noticed on the exhausted subject of the Bath waters. The writer in the 25th Number of the *Journal of Science and Arts*, on the "neglect of the Bath waters in the cure of disease," appears to have roused the Practitioners of Bath to a vindication of their fading reputation. In our last Number we had occasion to notice Dr. Barlow's work on the subject, and we have presented to our views another publication of the moderate size of 442 pages. Mr. Spry's book contains not only a treatise on the medicinal efficacy of the waters, but also an antiquarian and topographical account of the city of Bath and its springs. To the invalid resorting thither it may be useful in some respects, but we fear that the professional reader will find little in it which can be considered of much interest.

FOREIGN.

I. Leçons sur les Epidémies et l'Hygiène Publique, faites à la Faculté de Médecine de Strasbourg. Par Fr. Emm. Foderé, Professeur à cette Faculté. Tome premier. A Paris, 1822. 8vo. Pp. 523.

The work of the celebrated Professor before us, which has just arrived in this country, is only the first volume of a treatise on the nature, &c. of epidemics, and on public health. It consists of three sections, of which the first treats of the general causes of epidemics, and the second of these diseases as regards their formation and means of cure; and order first of section third, which is the only part of this section contained in the work before us, of those epidemics which are occasioned by eating and drinking. The whole of the volume our readers will find to be possessed of considerable interest. The author is evidently well read in English as well as in foreign literature, and we have no doubt that, if the remainder of the work be executed in the manner in which it has begun, it will be worthy of being ranked with his celebrated work on Legal Medicine, to which we have had such frequent occasion to refer in the pages of the *REPOSITORY*.

II. Sur l'Origine des Qualités Morales et des Facultés Intellectuelles de l'Homme, et sur les Conditions de leur Manifestation. Par F. J. Gall. Tomes 1 et 2. Paris, 1822.

About three years ago, M. Gall published an expensive work on the anatomy and physiology of the brain, but as its price was too high for a great portion of Practitioners, the work has been reprinted in the present form. The two volumes, which have already appeared, contain some con-

siderations upon the nature of man, upon that of his functions, upon the origin of his instincts, inclinations, talents; on the conditions requisite for the manifestation of the moral and intellectual faculties; on fatalism, materialism, &c.; on man considered as an object of education or punishment; on infanticide, mental alienation, &c.; on the functions of the brain, or of the organ of the soul and its parts; on the means of discovering, by aid of the condition of the brain, a measure for the intellectual and moral faculties, &c.; on sleep, dreaming, somnambulism, &c.

The principles espoused by Gall are so well known, that we shall not enter into any consideration of them at present: they are given in the work before us with a tolerable degree of clearness.

WORKS RECEIVED FOR REVIEW.

1. A Comparative Estimate of the Mineral and Mosaic Geologies. By Granville Penn, Esq. 8vo. Ogle, Duncan, and Co. London, 1822.

2. History of the Method of Cure of the various Species of Epilepsy: being the second part of the second volume of a Treatise on Nervous Diseases. By John Cooke, M.D., F.R.S., F.A.S., Fellow of the Royal College of Physicians, and late Physician to the London Hospital. 8vo. Longman and Co. London, 1823.

3. An Authentic Narrative of the Extraordinary Cure performed by Prince Alex. Hohenlobe, on Miss Barbara O'Connor, a Nun in the Convent of Newhall, near Chelmsford. By John Badeley, M.D., Protestant Physician to the Convent. 8vo. Whittakers. London, 1823.

LITERARY INTELLIGENCE.

In the press, and immediately will be published, in 8vo. illustrated with numerous Cases and Engravings, a Practical Treatise on the Symptoms, Causes, Discrimination, and Treatment, of some of the most important Complaints that affect the Secretion and Excretion of the Urine: the whole exhibiting a comprehensive View of the various Diseases of the Kidneys, Bladder, Prostate Gland, and Urethra. By John Howship, Member of the Royal College of Surgeons in London; Société Médicale d'Emulation of Paris; Royal Medical Society of Edinburgh; and Medico-Chirurgical Society in London, &c.

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Antimoni oxydum	-	6 0	Copaiba	-	8 6
— sulphuretum	-	1 0	Colchici Radix (sic.)	-	6 0
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Ferri subcarbonas	lb.	1 6
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Ferri ammoniatum	5	4
— tartarizatum	4	0
— Galbani Gummi-resina	8	8
— Gentiana Radix elect.	1	8
— Guaiaci resina	14	0
— Hydrargyrum purificatum	5	6
— præcipitatum album	9	0
— cum crota	4	6
— Hydrargyri Oxymurias	unc.	0 8
— Submurias	0	8
— Nitrico-Oxydum	0	8
— Oxydum Cinereum	1	6
— Oxydum rubrum	5	6
— Sulphuretum albrum	0	4
— rubrum	0	6
Hellebori nigri Radix	lb.	2 6
Ipecacuanha Radix	17	0
— Pulvis	18	0
Jalapæ Radix	6	0
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Kino	6	4
Liquor Plumbi subacetatis	P. lb.	1 6
— Ammonia	2 6	5 3
— Potasse	1	4
Linimentum Camphoræ comp.	5	6
— saponis comp.	3	6
Lichen	2	0
Lythæ	lb.	14 0
Magnesia	10	0
Magnesia Carbonas	4	0
— Sulphas	0	6
Manna	5	3
— communis	4	6
Moschæ pod. (32s.)	in gr. unc.	52 0
Masticæ	lb.	8 0
Myristicæ Nucel.	10	4
Myrrhæ	12	0
Olibanum	3	8
Opoponacis gummi resina	23	0
Optum (Turkey)	56	0
Oleum Ethereum	oz.	2 6
— Amygdalarum	lb.	3 3
— Anisi	unc.	1 8
— Anthemidis	6	0
— Caudæ	6	0
— Caryophylli	5	0
— Cajuputi	4	8
— Cardui	1	9
— Juniperi Ang.	3	0
— Lavandulæ	2	6
— Lilii	7	0
— Menthe piperitis	unc.	3 10
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Potassa Fusa	unc.	0 8
— cum Calce	0	6
Potasse Nitras	lb.	1 2
— Acetas	10	0
— Carbonas	5	6
— Subcarbonas	1	0
— Sulphas	1	2
— Sulphuretum	4	0
— Supersulphas	1	2
Potasse Tartaras	3	6
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— succinatus	3	6
Spiritus Cinnamomi	5	0
— Lavandulæ	3	6
— Myristicæ	3	0
— Pimentæ	4	0
— Rosmarini	6	6
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— Nitrici	6	0
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THE METEOROLOGICAL JOURNAL,

From the 19th JANUARY to the 20th FEBRUARY, 1823,

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20	D		16 26 30	29	56	29	61	84	90	E	ENE	Fog	Fine	Sno.
21			27 30 24	29	70	29	77	87	89	E	E	Clo.		
22			25 26 20	29	80	29	82	82	80	E	E	Fine	Clo.	
23			22 29 29	29	70	29	53	86	80	ESE	ESE	Clo.	Fine	
24			24 25 22	29	60	29	73	87	85	E	E var.	Fair	Fine	
25			23 24 21	29	68	29	52	80	96	E	ESE	Fair	Sno.	Sno.
26	☉		26 30 28	29	63	29	65	90	94	ENE	E	Fair		
27			29 31 36	29	52	29	33	84	98	SE	SSE	Clo.	Rain	
28			40 44 40	29	34	29	20	100	95	SW	SW	Rain	Clo.	Rain
29			45 49 44	29	02	29	02	99	98	SW	W	Rain	Sho.	Clo.
30			45 44 40	29	30	29	31	98	96	W	WSW	Clo.	Fine	Fair
31			41 41 39	29	06	28	90	97	78	ESE	ESE	Clo.		Rain
1			40 45 34	28	75	28	64	79	98	E	E	Rain		
2	☾	43	38 42 40	28	55	28	63	99	98	ENE	E.	Rain		
3		17	41 43 30	28	77	29	00	99	94	E	NW	Fog	Rain	
4			33 37 29	29	20	29	27	83	76	WNW	WNW	Fine		
5			30 35 30	29	35	29	63	76	81	NW	ENE	Fine		
6			31 34 30	29	37	29	25	88	97	SE	SE	Fine	Sno.	
7		29	32 36 31	29	17	29	00	100	95	S	SSE	Rain		
8			33 39 33	29	34	29	40	85	79	WNW	WSW	Fine		
9		11	37 42 37	29	51	29	34	76	88	NW	W var.	v. fine		Rain
10		15	43 48 41	29	33	29	23	85	88	WSW	NW	Rain		Clo.
11	☾	16	43 51 45	29	30	29	26	87	89	WSW	W var.	Rain		Clo.
12			47 52 39	29	21	29	20	84	85	WSW	WSW	Clo.	Fine	
13			41 45 35	29	38	29	46	71	74	SW	S	Fine		
14		09	37 42 37	29	30	29	40	77	79	WSW	WSW	Fine	Rain	Clo.
15		25	40 44 33	29	63	29	87	83	87	NNW	W	Rain		Clo.
16			35 39 32	30	00	30	09	79	85	NE	NE	Sho.		
17			34 38 35	30	01	29	85	85	82	NE	S	Sho.		Fair
18	☾		37 43 35	29	64	29	21	80	84	SE	S var.	Sho.		Rain
19		18	37 41 36	29	30	29	68	79	74	SW	W	Fine	Fair	

NOTICES TO CORRESPONDENTS.

Communications have been received from Messrs. Callaway, Gaitkell, Robinson, Harrison Wilkinson, and Ward.

We shall be obliged to our Correspondent who subscribes himself a Licentiate Apothecary, Dublin, to favour us with his name.

*** Communications are requested to be addressed (post paid) to
Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 112. APRIL 1, 1823. VOL. XIX.

PART I.
—
ORIGINAL COMMUNICATIONS.

I.

Case of Diabetes Mellitus, with Remarks, &c. &c. By
C. HEINEKEN, M. D., Madeira.

AGOSTINHO ANTONIO GOUVÊA, a master cooper, in his forty-sixth year, who had always enjoyed good health, although the habits of his youth had been dissipated and irregular, began, about the month of February, 1822, to lose flesh and strength rapidly, and to pass a very large quantity of pale sweet urine; he thinks, at one time, as much as ten wine quarts in the course of the night. The only medicine which he had recourse to was the liq. calcis. The quantity of urine diminished greatly, but it was always pale and sweet, and he became daily more weak and emaciated. On the 3d of June he applied to me. From a bulky and robust man he was reduced to the appearance which a child wears when labouring under mesenteric disease; — the abdomen was large and tympanitic, the thighs and legs shrunk and flaccid, and the countenance shrivelled and anxious. He had great prostration of strength, constant thirst, and a return of hunger almost immediately after each meal. The tongue was white and parched, the pulse small and quick; and although he contrived, with some difficulty and considerable fatigue, to walk to my house in the middle of a Madeira summer's

day, there was not the slightest perspiration on his skin, neither had there been since the commencement of his illness.

I ordered him pulv. scammonii, ℥j.—pulv. opii, gr. xij.—hydrarg. submur., gr. x., in twelve pills, one to be taken thrice daily. I directed his food to be entirely animal—his drink milk and lime-water—that he should abstain from fruits, vegetables, fermented liquors, and sugar, and that the quantity of urine made, and fluids taken into the stomach, should be measured.

8th.—On the 3d he passed eight quarts of urine in the twenty-four hours; on the 4th he commenced taking the pills; and yesterday the quantity of fluid which he drank, including broth, was eight quarts, and the urine evacuated six. It is nearly colourless, so sweet that the flies gather round the vessel in which it is contained, and has not the slightest urinous taste or smell.

R Pulv. scam., ℥j. — pulv. opii, ℥j. — hyd. submur., gr. v. — antim. tart. gr. ij., fiant pil. xij., sumat j. ter quotidie. A warm bath at the temperature of 100°, every night before going to bed—the chest, arms, and abdomen, to be thoroughly rubbed with sweet oil every morning, and a large flannel waistcoat to be constantly worn.

8th. Liquid drunk, 7 quarts. Urine passed, 8 quarts.

9th. _____ 7½ _____ 7 _____

10th. _____ 7 _____ 6 _____

11th.—The character of the urine is still unaltered; he has somewhat less thirst, and the wish for food does not return so soon after each meal. The tongue is still white and the pulse quick and small. The bowels are moved twice daily, but he gains no strength. There is no amendment in his looks, and he feels always feverish, with oppression after eating, and anxiety at the præcordia.

R Pulv. scam., ℥ij. — p. opii, gr. xxvj. — hyd. submur., gr. vj.—antim. tart., gr. ij., M. et divide in pulv. xij.; sumat j. ter die.

12th. Liquid drunk, 6 quarts. Urine passed, 6 quarts.

13th. _____ 9 _____ 8 _____

14th. _____ 6 _____ 6 _____

15th. _____ 6 _____ 7 _____

16th. _____ 5 _____ 5½ _____

17th.—He perspires occasionally during the day, and always now after each bath. The tongue is still white, but moist; the pulse natural; the thirst greatly abated. The inclination for food does not return so soon after eating, and he appears to be improving in his general health. The urine has a decidedly yellow hue, is less saccharine, and has a very slight saltish taste. Bowels confined. He is always drowsy but never complains of headach.

R Pulv. scam., ℥iss.—cambogiæ, gr. iv.—hydrarg. submur. gr. x—p. opii, grs., in pulv. xij.; j. ter die sumend.

18th. Liquid taken, 8 quarts.	Urine passed, 7½ quarts.
19th. _____ 7 _____	_____ 5 _____
20th. _____ 6 _____	_____ 4½ _____
21st. _____ 6 _____	_____ 5 _____

22d. — Hitherto I had omitted to take his weight. Yesterday he weighed 134 pounds English — his weight when in health was 183 pounds. He now perspires as freely as when in health — has less thirst — gradually gains strength — his hunger is satisfied for a much longer time after each meal, and the urine is becoming sensibly salt to the taste.

R Pulv. scam., ℥iss. — pulv. cambogiæ, gr. vj. — hydrarg. submur., gr. v. — pulv. opii, gr. xxxvj., in pulv. xij. ; j. ter die.

23d. Liquid taken, 6 quarts.	Urine passed, 5 quarts.
24th. _____ 6½ _____	_____ 7 _____
25th. _____ 5½ _____	_____ 5 _____
26th. _____ 6 _____	_____ 5 _____
(Opium increased to ℥ij. in the 12 powders.)	
27th. _____ 5½ _____	_____ 5 _____
28th. _____ 5 _____	_____ 3½ _____
29th. _____ 6 _____	_____ 5 _____
30th. _____ 7 _____	_____ 5½ _____
(Repet. pulv. vj.)	
July 1st. _____ 5 _____	_____ 5½ _____
2d. _____ 7½ _____	_____ 6 _____

3d. — Yesterday he took no medicine. He had more thirst, urined more frequently during the night, and felt in every respect worse ; — on the whole, he gains strength and flesh — has no headach, but a constant inclination to sleep — perspires freely, and the bowels are open.

R Pulv. scam., ℥j. — cambogiæ, gr. viij. — hydrarg. submur., gr. iv. — pulv. opii, ℥iiss., in pulv. xij., sumat j. ter quotidie, c. liq. potassæ, ℥j., singulis dosibus.

6th. Liquid taken, 7½ quarts. Urine evacuated, 7½ quarts.
Increase the calomel to seven grains, and the opium to ℥j., in the twelve powders.

7th. Liquid taken, 5½ quarts.	Urine passed, 5 quarts.
8th. _____ 6½ _____	_____ 4 _____
9th. _____ 6½ _____	_____ 4½ _____
10th. _____ 4½ _____	_____ 4½ _____
(Repet. pulv. xij.)	
11th. _____ 6 _____	_____ 5 _____
12th. _____ 5½ _____	_____ 4½ _____

July 14th. — The urine is now reduced to three quarts during the twenty-four hours, and is natural and healthy in colour, smell, and taste. He perspires profusely, and complains of great debility. The pulse is 100, and small — the

tongue still very white, but not loaded. Many boils have broken out on the arms, hands, and thighs. The bowels are moved two or three times daily, and the motions are, and they always have been, healthy in appearance. The gums have been, for a length of time, spongy, inflamed, and tender. He makes three meals daily, always with appetite, but has no craving for food, as formerly, in the intervals. He sleeps throughout the night, and is always dozing when sitting still during the day. A few days back he complained of uneasiness at the scrob. cordis, and of a dull pain between the shoulders, for which a blister was applied, and on that night he passed no urine. The potass he has neglected to take since the 8th.

Omit the bath and leave off the flannel waistcoat; continue the friction with oil and the powders last ordered, and resume a dram of liq. potassæ thrice daily.

17th. — Perspires freely, but less; urine healthy in every respect, and the quantity about three and a half quarts in twenty-four hours; still some pain between the shoulders, and some oppression at the scrob. cordis.

Emp. lyttæ. Cont. liq. potassæ. Cal., gr. viij. — p. opii ʒiiss. in the twelve powders.

21st. — Gains strength and flesh; urine healthy.

Cont. liq. pot. Opium, ʒij. in the twelve powders.

26th. — Still improving.

Calomel and camboe, 6 grains — opium, ʒss. in the 12 powders.

August 1st. — The quantity of urine has varied since the last report from three to four quarts in every twenty-four hours, but never exceeded the latter quantity. In taste, smell, and colour, it has always been healthy. He improves also in strength and flesh daily.

Reduce the opium to 25 grains in 12 powders, taking one three times in the day as before, and continuing the liq. potassæ and friction with oil.

6th. — Yesterday he omitted both the pills and potass; the quantity of urine was five quarts, and he does not feel so well in any respect.

Reduce the calomel and camboe to five grains each, and the opium to ʒj. in 12 pills, taking one thrice daily; continue the liq. potassæ; omit the oil.

12th. — Urine as on the 1st; health and strength improving rapidly.

Calomel, 4 grains — opium, 15 grains, in the 12 pills.

16th. — The same.

Opium, 10 grains only in the 12 doses.

23d. — Reduce the opium to six grains.

27th. — Opium, three grains.

September 2d. — He is now able to take very considerable exercise without fatigue. His weight is 142 pounds. The tongue is clean, moist, and healthy — bowels regular — pulse natural. He perspires as he used to do before his illness. The muscles of the thighs and legs are becoming plump and hard. He has no thirst, a good appetite, and his countenance is cheerful and healthy.

R Pulv. scam., 3ss. — cambogiæ, gr. vj. — hyd. submur., gr. xij. — p. opii, gr. x., in pil. xij.; sumat j. om. nocte h. s.

5th. — No motion during two days.

Ext. colocynth. comp., ʒj.

7th. — The bowels have not yet been relieved; during the last three nights he has omitted the pills ordered on the 2d, but the urine is the same.

Croton oil, half a drop in a pill.

12th. — The croton oil purged him most actively; he cannot enumerate how often, but says he was never so purged in his life, and has since had two evacuations daily without taking other medicine.* The pills of the 2d have not been resumed, and the potass has been taken twice only each day. The urine is quite healthy and natural, and his health continues to improve.

19th. — He has taken no medicine of any description for several days — makes no complaint, but the bowels are inclined to be torpid. He was ordered still to adhere to an animal diet — to eat neither fruit, sugar, nor drink fermented liquors, and to take five grains of blue pill every night.

October 8th. — The blue pill was taken for about a week. He is still cautious as to diet, but feels as strong and well in every respect as he did previous to his illness, and is capable of as much exertion. His weight is 175 pounds, which is within eight pounds of what he ever weighed. The appetite is good, pulse natural, and tongue perfectly clean and moist. He perspires freely, and has always two healthy evacuations from the bowels daily.

Remarks. — Without attempting to theorize on the nature of the disease, or on the *modus operandi* of the medicine, this case is presented to the REPOSITORY as a mere practical fact, of the existence of the one, and the efficacy of the other; † and I have the sanction of my friend Dr. Henry,

* This effect of the croton oil has been remarked by several Practitioners.—EDITORS.

† The quantity of solid opium taken was about six hundred grains, and during eight days fifteen grains daily.

who saw the patient shortly after he had placed himself under my care, as to the nature of the complaint, and its hitherto complete and permanent removal. The powerful action of the half drop dose of croton oil is mentioned because I believe it to be a remedy now tried for the first time in this island, and I find that its effects are more certain when administered in that quantity and repeated, than when a larger dose is given at once, as in the latter instance it is frequently rejected from the stomach.

Although it may be deemed irrelevant, I am tempted briefly to notice two other medicines which have been alternately extolled and condemned by different members of the medical profession. The one is cubebs, which, in the course of my limited practice in England, had certainly failed in as many cases as it had succeeded — here I have never yet met with a single instance of failure. I never give it in less than dram doses three or four times in the course of the day, and am not deterred from continuing the use of it by an accession of inflammatory symptoms. We procure it generally from Lisbon, and I think it has a more highly aromatic smell and pungent flavour than that which is sold in London.

The other medicine is the Prussic acid. During the winter of 1820 I took six drops of some procured from Mr. Battley, of Fore Street, thrice daily for many days, but without the slightest alleviation of cough, or any sensible effect upon the pulse, stomach, bowels, or any part of the system. Since my residence here I took, for a considerable time, from two to eight drops, three times in the day, of the same acid prepared at the Apothecaries' Hall, and also of that made by the druggist recommended by Dr. Granville — neither the one nor the other produced any benefit. In a case of spasmodic asthma, two drops at a dose of the latter were given for some time without any advantage. A young lady under my care, with symptoms of incipient phthisis, took also from two to five drops of the same preparation, but her cough was not at all relieved, nor the pulse affected; and a lad, to whom it had been administered by a Portuguese Physician at Lisbon, brought some with him from that city, and persevered in its use (five drops thrice in the day) for eighteen days after he reached this place, without the slightest beneficial result.

Funchal, Madeira, 8th October, 1822.

II.

Case of Cynanche Laryngea. By WILLIAM GAITSKELL, Esq., Fellow of the Royal College of Surgeons, &c.

W. G., forty-six years of age, dark complexioned, and of an inflammatory diathesis, was attacked suddenly, about eight in the evening of Sunday, February 11th, 1810, with a pain on the right side of the root of the epiglottis, which, at first, was only felt at the time of deglutition.

A month previous to this he had been much exposed to the inclemencies of the weather, particularly at night, which was cold, wet, and variable. By this was induced a catarrhal affection, with occasional sneezing and uneasiness in the frontal sinuses, but without any general illness.

When the pain in the throat commenced, the other irritations subsided. About twelve at night, four hours after the attack, rigours came on, succeeded by heat, and extension of the inflammation to the epiglottis, palatine arches, tonsils, velum pendulum, and uvula.

The violence of inflammatory action, on organs so delicately constructed, created alarm, and professional aid was requested. About one in the morning, blood was taken from the arm, the movement of the bowels promoted by calomel and purgative medicines.

At seven the next morning, there being no mitigation of symptoms, but an increase of the febrile action, the bleeding was repeated. About one in the afternoon of Monday, Dr. Babington, Sir Astley Cooper, and Mr. Joseph Gaitskell, very kindly combined their opinions, and recommended, the constitutional symptoms being abated, the application of leeches to the throat, with scarifications of the tonsils and uvula; and these to be assisted by hot stupes of chamomile tea and the frequent inhalation of vapour, while the calomel and purgatives were continued. By these means some dark-coloured motions were procured; but the blood appeared perfectly healthy.

At ten the same evening the professional gentlemen visited their patient, and finding the fever increased, with great irritation of the glottis, and the power of articulation suspended, they ordered a repetition of bleeding, a blister to the throat, antimonial powders every four hours, with pediluvia, and the purgative in the morning. In a few hours a slight perspiration came on, which it was found impossible to encourage, from the restlessness of the patient, and the inability to breathe except in an upright position of the trunk. The body

was supported by a bed-chair to prevent suffocation, which the œdematous state of the uvula and accumulation of mucus threatened. The internal fauces were frequently lubricated by barley water carefully swallowed; and the cold pulp of roasted apples was found peculiarly grateful. These liquids occasioned great pain in deglutition and a teasing irritation to cough. In fact, deglutition was difficult and highly distressing, requiring the nicest attention, both in selecting the consistency of the fluid, and the mode of performing the office.

On Tuesday the symptoms were relieved, but in the evening, a fresh exacerbation coming on, the bleeding was obliged to be repeated. The night was passed with an abatement of fever, but with great inquietude, from the accumulation of mucus in the throat. The next morning, Wednesday, every symptom was moderated, and convalescence seemed nearly approaching; but, with the evening, the difficulty of respiration again returned, with such irritation of the tracheal membrane, as to endanger suffocation. Bleeding was resorted to again, when slight delirium came on, and the symptoms immediately yielded.

From this time inflammatory action ceased, copious secretion took place both from the fauces and tracheal tube, which, by its viscosity and quantity, was so distressing as to require the aid of an emetic. In a few days the secretion ceased, and convalescence was complete.

III.

Case of Tumour of the Abdomen from Chronic Inflammation of the Peritoneum. By RICHARD WARD, Esq., Member of the Royal College of Surgeons, &c.

MICHAEL SLATER, ætat. thirty-one, was admitted into St. Giles' Parochial Infirmary, October 22, 1822, having a tumour of considerable magnitude situated on the right side of the abdomen, attended with frequent pain and vomiting, extreme emaciation, and hectic symptoms. He stated that he had been ill five months; that his first symptoms were, occasional pain about the navel—which he considered of a colicky nature—vomiting, and dark-coloured evacuations, the latter of which he described as resembling ink; and that about a month after these symptoms had come on, he discovered a small tumour on the right side of the abdomen, which, with his other symptoms, had continued gradually to increase. The tumour, from the time of his admission, became progressively larger, and eventually occupied nearly the whole of the umbilical, right and left iliac, and hypogastric regions,

was extremely hard and somewhat irregular, but gave no particular pain on pressure. His situation was rendered much more comfortable, and his most urgent symptoms were relieved, by leeches, fomentations, opium, and the effervescing saline mixture. His strength, however, continued rapidly to decline, and his emaciation became more extreme. About three weeks previous to his death a distressing diarrhoea came on; his evacuations, which had hitherto been scanty, and not procured without the aid of medicine, now became copious, of a light colour, purulent, and very offensive. He died December 18th.

Dissection.—The peritoneum lining the abdominal muscles was found remarkably thickened (the thickening varying from one and a half to two inches) by a substance somewhat resembling fat, but much more firm. On exposing the intestines, an appearance presented itself which at first seemed difficult to unravel: on more minute examination, however, it was evident that the tumour was formed by the same thickening or organized deposition already described, and which extended more or less over the *whole surface* of the peritoneum. The parts more immediately forming the tumour were the lower portion of the ileum and ascending colon, which, having become agglutinated by coagulated lymph, formed an immense and compact mass. On the anterior part of this tumour was an opening formed by ulceration, through which a large quantity of matter had escaped into the cavity of the abdomen, which, in all probability, was the immediate cause of death. On following the course of the outer opening, a cavity was laid open, occupying its central part, and extending about eight inches from side to side, through which all excremental matter must have passed for some time previous to death, the structure of the intestines being at this part totally destroyed by ulceration; consequently, there were four openings communicating with the cavity formed by the ascending colon on one side, and the inferior part of the ileum on the other. The intestines through the greater part of their course were considerably constricted. The ureter and pelvis of the right kidney were greatly distended with urine. The lungs were free from tubercles, and appeared perfectly healthy. The remaining viscera were natural.

This case, in the earlier stages of its progress, was expected to prove of an aneurismal nature. The patient was previously healthy, and accustomed to a laborious employment; and the occasional pain and vomiting seemed rather the effect of irritation and pressure on the surrounding viscera, than the consequence of peritoneal inflammation.

But the diffused and irregular appearance of the tumour as the disease advanced, the absence of pulsation, the emaciated state of the patient, and, lastly, the purulent appearance of the evacuations, obviously proved the disease to be of a different character: its true nature, however, was satisfactorily demonstrated by the dissection.

IV.

Case of Strangulated Hernia, followed by Dysentery, &c. By
J. M. ROBINSON, Esq., Surgeon, &c.

JOHN PERKINS, sixty-four years old, an abstemious liver, and of thin, spare habit, had been the subject of scrotal hernia for four years. On the morning of the 30th December, an additional portion of intestine descended, as he proceeded to his work. It became very painful towards noon. When I saw him (about five o'clock in the evening), the scrotum was distended to about the size of an inflated calf's bladder. It was apparently very much inflamed. I immediately employed the taxis, and continued it for the space of half an hour. Finding that I could not reduce it, I recommended him to go into Guy's Hospital, where he was immersed in the warm bath, bled, and two kettlesful of ice water were poured upon the tumour, Mr. Key (Assistant-Surgeon to Guy's, and Demonstrator of Anatomy at the Theatre, St. Thomas's), at the same time, employing the taxis. These means proving unsuccessful, Sir A. Cooper was requested to see him. His attempts to reduce the intestine being ineffectual, he ordered a tobacco enema to be administered; this was immediately done, and repeated after two or three hours. He passed some *feces* after each enema. All the above means proving ineffectual, the operation was recommended; but he steadily refused to submit to it, and left the hospital on the following morning. I was again requested to visit him at his own abode. I directed the tumour and abdomen to be fomented with a decoct. of flor. anthem. cum cap. papav., and nothing to be taken but small quantities of beef tea or mutton broth. In the afternoon Mr. Key was so obliging as to visit him with me. Eight leeches were applied to the tumour, and a pint of tepid water, with a little broth, thrown up the rectum every two or three hours. His pulse was then 90, and slightly intermittent. The leech bites had bled profusely, and the tumour had diminished in size and become softer. The *fotus* and enema were continued.

January 1st.—The tumour was the same as last night.

Pulse 86, more regular, and firm. Tongue moist, but furred. He had an increase of sickness, with tension and pain in the abdomen, particularly in the course of the ascending colon. Fetus, enema, &c., were continued.

2d.—Tension and pain were increased. Hæmorrhoids, with which he had been frequently troubled, had now attained so large a size, that the pipe could not be introduced to continue the fetus, &c.

3d.—He has passed a very restless night; there was a peculiar, anxious, desponding cast in his countenance, indicative of an increase of pain. The pulse, sickness, thirst, tension, and appearance of the tongue, were as before. When employing the taxis this morning, I was pleasantly surprised to find that a portion of the intestine returned, preceded by a gurgling noise, and the tumour was diminished one-half its former size. I was induced from this to continue my attempts much longer than formerly, in the hopes of completely reducing it; but I was unable to effect my purpose. I then ordered the fetus to be repeated every two hours, and such a position to be observed as would relax the abdominal muscles, also a gentle pressure to be kept upon the tumour with his hand. About noon he sent to say that it was still less than when I left him in the morning: on visiting him I found it scarcely one-third its previous bulk, but still I could not completely reduce it. (*Evening*.)—His thirst was very great; he drank freely of cold water, which was always immediately rejected. Pulse 80. He repeatedly passed flatus per anum. Fetus, beef tea, &c., were continued.

4th.—He had a bad night, and his former anxious looks again became depicted on his countenance. Pulse 68, smaller, and rather intermitting. Thirst increased; sickness and appearance of the tongue as yesterday; the tension of abdomen was increased. The operation was again mentioned; but he steadily refused the adoption of this measure.

5th.—He passed a still more restless night than before. Pulse 92, and intermitting; he perspired profusely; tongue as before; thirst, sickness, pain, and tension, were very evidently increased; the tumour remained stationary. Fetus and regimen were continued.

6th.—He had no sleep. The anxiety before marked in his countenance was still greater; pulse 96, and gradually sinking; the pain and tension increased rapidly through the day. He would have consented to have the operation performed to day, but the opposition of his wife and attendants shook his resolution.

7th.—This morning Mr. Fagg accompanied me to see him. We found the same symptoms as yesterday. Our

united efforts in persuasion obtained a partial consent to have the operation performed, and we left him with a promise that Mr. Key should call upon him. Accordingly, this gentleman accompanied us in the afternoon, with the intention of operating; but we found him much worse than in the morning, and apparently sinking very rapidly. He now felt himself so much weaker, and so much more depressed, than at our morning visit, that he again positively refused to have the operation performed. Indeed, Mr. Key did not press the performance of it, for the pulse sank so much, during the time we were in the room, that he was fearful the man might die upon the table: he, therefore, recommended that the fotsu should be continued, with the beef tea, &c. This *evening* he rallied a little: the pulse was 92, and more regular.

8th.—He passed a very restless night. Pulse 96. Thirst was very great. Sickness and pain were less severe; but the abdomen was enormously distended. He had, for three or four days, frequently expelled flatus per anum. This *evening* he had precisely the same symptoms as in the morning. I made an attempt, as usual, to reduce the intestine. In a few minutes I was agreeably surprised to find that a portion of gut went up, preceded by a gurgling noise; and by persevering, I effected a complete reduction within half an hour from my entering the room. He felt immediate relief. Shortly after, Mr. Key came in, and a little water being given to him, we staid a considerable time to see if the stomach would reject it: it did not (this fluid had always before been rejected immediately). Mr. Key prescribed the following aperient:—

R Magnes. Sulph., 3j.

Magnes. Carb., gr. j. M.

ft. Pulv. 3tiâ quâque horâ sumend. in Oss. Aquæ tepidæ.

8th.—He had slept comfortably. Pulse 92. Sickness nearly gone. Tongue moist. The tension of the abdomen had disappeared. He expressed himself as feeling much easier and better, but extremely weak. He had passed three very hard, black, offensive motions. The third costive motion was soon followed by a violent diarrhœa, after which the powders were omitted. This *evening*, the pulse was 88, very low, and intermitting. He was ordered to take a wineglassful of porter frequently, and the following draught:—

R Ammon. Carb., ʒss.

Tinct. Opii, gr. xx.

Aquæ Puræ, f. ʒiss. M.

ft. haustus, 5tiâ quâque horâ sumendus.

9th.—He had slept well. Pulse 84, fuller, but intermitting

No pain of the bowels, nor sickness. Increased thirst. Tongue dry and furred. He complained of pain in the chest, with oppression. Had taken beef tea. He had no motion since taking the first draught. Heat of skin, which was before lower, was now rather higher than natural. He was ordered to resume the aperient medicine, in small doses, and to take double the quantity of porter before allowed. *Evening.*—The pulse was 98, and very small. He had some sleep in the afternoon; and passed two evacuations. Heat of the skin was again lower than natural, particularly in the extremities. Medicines and diet were continued as before.

10th. — Pulse 100. Thirst very great. Tongue dry. He was quite free from pain in the abdomen, but complained of a soreness in the left side, in the situation of the false ribs, which had increased through the day. He had slept well in the night, perspired freely, but always awoke in a state of great alarm. Heat of skin natural. Appetite good. As he had not had a motion since yesterday, I ordered an increased dose of the aperient medicine. His voice had been, for three or four days, sometimes shrill, at others a mere whisper. The stimulant medicine was continued.

11th. — He had slept the greater part of the night. Pulse 88, fuller, and quite regular. Appetite good. Had had three copious motions. Thirst much abated. Heat of skin natural. He said he "felt himself quite a man this morning." He complained of sores on his shoulders, from pressure. In the course of this day he had several evacuations. The stimulant medicine was continued; but the aperient was omitted.

12th. — Pulse 94. Diarrhœa has continued. He, this morning, complained of pain in his eyes, and, on inspecting them, I found that he had ophthalmitis, which had existed some days; for pustules had formed on each cornea, for which I prescribed a lotion, consisting of the solution of six grains of the sulphate of zinc in six ounces of rose water.

13th. — He had little or no sleep last night. Pulse 96, and extremely low. Eyes worse. Diarrhœa worse, and attended with tenesmus, and other characteristic symptoms of dysentery — the motions were bloody, and contained scybala. At three o'clock Mr. Key saw him with me. He was ordered to take small quantities of wine, instead of the porter. The stimulant medicine was discontinued.

R Pulv. Cretæ Comp., ʒj.

2dâ quâque horâ.

14th. — The dysentery had harassed him through the

night. Pulse 84, and scarcely perceptible. His motions contained small pieces of something resembling portions of mucous membrane. His eyes were better. The ulcerated parts on his shoulders discharged a great deal. Deeming this a critical moment, I proposed to Mr. Key, who concurred with me in considering the case nearly hopeless, that our patient should take small doses of the ol. terebinthinæ; and immediately I prescribed the following :—

R Olei Terebinthinis, f. ʒj.

Syrupi Croci, ʒss.

Tincturæ Opii, ʒij.

Mucilaginis Acaciæ, ʒv.

Ol. Menth. Pip., gʷ. ij. M.

Sumat cochl. parv. j.; omni dimid. horâ.

At eleven o'clock this *evening* I found him much better; the turpentine had a wonderful effect. He has not had a motion since the first dose. Pulse was 80, and fuller. He slept soundly in the afternoon. Heat of skin natural. Thirst very great, and tongue dry. The medicine was directed to be taken less frequently. He was allowed to take arrow-root in milk, and to continue the wine in very small quantities.

15th.—Pulse 90. Thirst less; appetite good; heat natural; has had four motions in the night, but none through the day. Tenesmus much abated. Eyes more inflamed; and the face was this morning completely covered with a papular eruption. The medicine was directed to be discontinued, but to be again resumed if the dysenteric symptoms returned.

16th.—He slept well last night. Pulse 88. Eyes better: The sores on the shoulders were healing; but the appetite was not so good, and his spirits were more depressed. This *morning* he had not had a motion, but had frequently felt a tenesmus, for which I ordered him to take gr. opii, gr. j. Stia quâque horâ. Since which, he has had one motion, attended with very little tenesmus. Continue the medicine.

17th.—Pulse 90. Slept well. Appetite better than it has hitherto been. He said he felt "a very great deal better." He had three motions in the early part of the night, attended with very slight tenesmus.

18th.—Pulse 84. He felt much better, in every respect, except a little tenesmus once or twice, which was removed by taking an opium pill.

19th.—He has not slept so well again. Appetite worse. He has had three motions, and the tenesmus has returned. Ordered to take the pills more frequently.

20th.—The pills relieved the tenesmus. He felt drowsy :

His spirits were low; but his other symptoms were as before. The pills were discontinued.

R Tinct. Colomb., f. ʒss.

Infus. Sennæ, ʒj.

Infus. Gentianæ Comp., ʒivss. M.

ft. mist. cujus capiat cyathus, 4tâ quâque horâ.

February 9th. — From the 20th of last month he gradually improved, with occasional slight relapses, and he is now in a perfect state of health; except that his lower extremities are weak; for which I prescribed the following liniment: —

R Lin. Terebinth., ʒj.

Liq. Ammon. Carb.

Ol. Olivar. ā. ā., ʒss. M.

ft. linit. bis terve die, ad sacrum applicand.

High Street, Borough.

V.

Observations on the Secale Cornutum, or Ergot of Rye; with Directions for its Use in Parturition. By JOHN STEARNS, M.D., of New York.

WE have no information when the *secale cornutum*, or ergot, was first introduced into medicinal use. It may have experienced the vicissitudes of other medicines, which, owing to their alternate rise and fall not being known to succeeding ages, have been repeatedly promulgated to the world as new discoveries. It has been recently supposed to have constituted the grand arcanum of an Accoucheur in Holland, who, in 1747, acquired great fame for his success in obstetric practice. It was subsequently used in France, till it was interdicted by a legislative act in 1774. Not being subjected to experimental tests, nor prescribed by scientific rules, it was probably exhibited in quantities, and at times, very unfavourable to its safety and success. The injurious effects of such vague practice, and the prevalent opinion that it possessed deleterious qualities, were the probable reasons that caused its rejection.

It was not till the year 1807 that the ergot ever appeared before the public in a form to arrest the attention of medical men. Some years previous to this, I was informed of the powerful effects produced by this article, in the hands of some ignorant Scots women, in the county of Washington. Determined to try its efficacy, I procured a quantity from a field of rye. My information was such as to impress upon my mind

the necessity of extreme caution in my first experiments. The continued influence of this impression upon my subsequent practice has been a source of much consoling reflection. It has tended to prevent those fatal errors which have so often occurred, and which, I trust, will be satisfactorily explained in the ensuing remarks.

The frequent recurrence of cases in my obstetric practice afforded ample opportunities of executing my design to perfect satisfaction. I gave it in powder and decoction, but the superior efficacy and convenience of the latter soon gave it the decided preference; and in no instance did I ever give more at a dose than ten grains; the ordinary quantity was much less. Its sudden and powerful operation upon the uterus early taught me the necessity of those rules, which I subsequently published, and which experience has since amply confirmed. The publication of my letter to Dr. Akerly, in 1807, produced an immense number of applications from remote Practitioners. I immediately forwarded to each samples of the ergot, with directions for its use. By these means it was sooner introduced into general practice than I anticipated. Its use was much extended in New England, by the judicious dissertation of Dr. Prescott, read before the Massachusetts Medical Society in 1813. The New England Journal of Medicine and Surgery contained the opinions and experience of several Practitioners in that section of country. While it met with general approbation and success, some ascribed to it the fatality of still-born children; and a few, probably influenced by the prejudices of the French, considered it deleterious. The latter opinion was supported by Dr. Mann, Surgeon-General of the Northern Army, in a series of essays published in 1813, and intended to prove that the pneumonia typhodes, then prevalent in the country, derived its origin from this source. This was amply refuted by Dr. Henry S. Waterhouse, in a paper published in the New England Journal.*

The same opinion has been reiterated in some periodical works, and inaugural dissertations, which the young authors imagined they had fortified by experiments upon insects. But it is not by such analogies that important principles in medicine are to be settled. We must refer to the human system as the only correct test for experiments of this sort. And here we find rash Practitioners exhibiting the ergot by ounces, to the extent of a quarter of a pound, in less than twenty-four hours; and in some instances of amenorrhoea.

* N. E. Journal, Vol. V. p. 235.

and illegitimate impregnation, it has been continued in large quantities for weeks and months, without producing any deleterious effects upon the females, or upon the foetus in utero. The suggestion of its deleterious influence upon the child, when cautiously given in ordinary parturition, is undeserving of serious notice. Those who exhibit this article in such enormous quantities, and at times and under circumstances unfavourable to its success, and then proclaim it to be "fatal" or "inert," are influenced by other motives than a desire to elicit truth. Tried by such practice, opium, mercury, and antimony, would long since have been condemned and rejected from the *materia medica*; and the last was actually consigned to this fate, by the civil authorities of France, after its fatal effects had been *fully proved* by the bold empiricism of that day.

In the accounts which impute the death of still-born infants to the ergot, we do not find that minute detail of symptoms, of the quantities given, and of the times and circumstances of its exhibition, which are necessary to enable us to form a correct opinion of the propriety of the prescription. No one can hesitate to believe, that, under certain circumstances, such must be its inevitable effects. And I most sincerely admonish all those who experience such ill success, entirely to abandon its use. On no principle can a continuation of such practice be justified. I can, however, with much satisfaction affirm, that such has not been the result of my experience, and in no instance has either mother or child sustained any essential injury, which would not have been aggravated by its omission. These remarks are fortified by the testimony of many eminent *Accoucheurs*, whose obstetric practice has been extensive, and most of whom have used it for the last fifteen years with the most complete success.* This discordance of opinion can be explained only by supposing a difference in the circumstances, modes, and times, of its exhibition.

It is important, however, to remark, that those cases which indicate the use of the ergot, would have proved hazardous to the life of the mother or child, and peculiarly distressing to both, if it had not been given. When, therefore, these unfavourable effects occur after its exhibition, they are very improperly attributed to the ergot, instead of their real cause, the intrinsic difficulty of the case. It is to prevent these, and to save life, that it ought ever to be prescribed. These effects I have often witnessed, and for this purpose has it frequently been administered by others with equal success.

* N. E. Journal, *passim*. Med. Rep. Vol. VI. N. S. p. 403.
Drs. Prescott, Chapman, &c. &c.

But never, I hope, will this, or any other recommendation of its utility, delude others into the use of it for any other purpose, or under any improper circumstances. If such, in any instance, has been the effect of the opinion that I published in 1807, "that it never produced any bad effects on the patient," I now solemnly retract it. Its bad effects have been too often asseverated to admit of a doubt. I did not then anticipate the abuses to which it has since been subjected. Should these continue, another legislative interdict would be extremely desirable.

To arrest the evil consequences of such practice, and to restrain the use of the ergot, I published, in the 7th volume of the *New England Journal*, some plain and important rules, which I deem proper to subjoin, with explanatory remarks, and the addition of those cases in which its use is particularly indicated.

1. "It should never be administered when nature is competent to a safe delivery."

In elucidation of this rule it may be observed, that parturition is one continued process from beginning to end; one portion of which, like the links of a chain, necessarily precedes, in close connexion, that which follows, thus preparing in regular succession suitable changes in the parts concerned. If the interference of art interrupt this order of nature, the chain will be broken, and the whole process may be converted into a difficult labour.

2. "It should never be administered until the regular pains have ceased, or are ineffectual, and there is danger to be apprehended from delay."

3. "It should never be administered until the rigidity of the os tincæ has subsided, and a perfect relaxation induced."

I am aware, that in my first publication I intimated that the success of the ergot probably arose from a nausea excited in the stomach, and thence affecting the uterus by sympathy, produced a correspondent relaxation in the rigid fibres of the os tincæ. Subsequent experience has not justified this conclusion, and I have always found it necessary in such cases to premise copious bleeding.

4. "It should never be administered in the incipient stages of labour, nor until the os tincæ is dilated to the size of a dollar."

The success of the ergot is in no case more evident than in the selection of a suitable time of its exhibition. Although often given to procure abortion, it does not appear to have succeeded. It also generally fails of complete success when given in the early stage of labour, and before the os uteri is sufficiently dilated and relaxed. The pains induced under

these circumstances often terminate before the labour is fully accomplished. If it is delayed till these favourable changes are produced, its success in promoting the action of the uterus is more certain than tartrate of antimony upon the stomach, or jalap upon the intestines. But while an attentive observation of its effects, under different circumstances, in several hundred cases, have enabled me to predict its precise operation in almost every instance, I feel incompetent to explain why it fails in the one, or succeeds in the other. Its *modus operandi* is a desideratum, to harmonize conflicting opinions, to prevent, in all cases, its injurious effects, and to show why, under certain circumstances, it is inoperative, and, under others, powerfully efficacious. Dr. B—— informed me, that he once gave it to a woman before any symptom of labour had appeared, to enable him to perform a journey which this case delayed. In one hour labour actually commenced, and regularly proceeded through its different stages to a safe and expeditious delivery. Had the presentation in this case been wrong, and other circumstances unfavourable, his premature prescription might have been fatal to both mother and child. I therefore seriously admonished him never to repeat it in a similar condition.

5. "It should never be administered in any case of preternatural presentation that will require the fœtus to be turned."

The efficacy of the ergot is fully proved by the peculiarity of pains which it induces. From five to twenty minutes we first discover a bearing down effort of the patient. This gradually increases without the least intermission till the delivery is completed. During such an uninterrupted action of the uterus, all efforts to turn the fœtus must be unavailing and hazardous.

6. "It should never be administered during the continuance of one labour, in larger quantities than thirty grains by decoction in half a pint of water." A tablespoonful of this given every ten minutes, generally succeeds better than a larger dose. While this quantity produces its most favourable effects upon the uterus, it does not affect the stomach with nausea or vomiting, which sometimes interrupts its successful operation.

Three grains, with a grain of opium, steeped in a gill of water, and a teaspoonful given every ten minutes, have succeeded in reproducing the interrupted pains of regular labour. I have, therefore, generally preferred it in this form, as being perfectly safe, and exempt from the objections to the incessant forcing pains induced by larger doses.

By a due observance of these negative rules, it will be per-

ceived, that but few cases can occur that will require the ergot; and for several years past I have not found it necessary to administer it oftener than in one for every thirty that I have attended. But so important do I consider it in certain cases, that I always have it ready for use on the occurrence of any emergent symptoms that may render it immediately necessary.

I will now proceed to consider those indications which render its exhibition necessary and important.

The ergot is indicated, and may be administered,

I. When, in lingering labours, the child has descended into the pelvis, the parts dilated and relaxed, the pains having ceased, or being too ineffectual to advance the labour, there is danger to be apprehended from delay, by exhaustion of strength and vital energy from hæmorrhage or other alarming symptoms.

II. When the pains are transferred from the uterus to other parts of the body, or to the whole muscular system, producing general puerperal convulsions.

After premising copious bleeding, the ergot concentrates all these misplaced labour-pains upon the uterus, which it soon restores to its appropriate action, and the convulsions immediately cease. A remarkable instance of its efficacy in these affections is contained in a letter which I received from Dr. Henry S. Waterhouse, of Franklin county, and is too interesting to be omitted in this place.

"Mrs. L. H., of nervous temperament and delicate habit, aged nineteen, was, on the 24th of June, 1814, seized with the usual precursory symptoms of parturition. I found her affected with wandering pains of the back and abdomen, some throbbing pain of the head, and a tense pulse, though natural in frequency. The loss of fifteen ounces of blood, with fomentations to the abdomen, and a dose of opium, gradually gave her relief, and at evening she fell into a quiet and refreshing sleep. The next morning I was sent for in haste, and was informed that, after a quiet night, she discovered in the morning some symptoms of derangement. She complained of wandering pains in the abdomen, and of a throbbing sensation in her head. These symptoms increased till the most horrid forms of puerperal convulsions were brought on, that I ever witnessed. She was constantly muttering things in the most incoherent manner; her eyes were rolling from side to side, and turning up in their sockets. She had so frequently bitten her tongue, that the blood was flowing profusely from her mouth; her extremities were of a deadly coldness, and the violent spasms and contractions of the muscles of her limbs, back, abdomen, neck, and lower jaw,

were truly alarming. The pulse was natural, but less frequent than in health. With much difficulty, her lower extremities were immersed in warm water, and large quantities of the tinctures of opium and assafoetida were forced down. Her abdomen was fomented, and her extremities smartly embrocated with stimulating applications, &c: but all to no purpose. There was no hæmorrhage, but, from the condition of my patient, it was impossible to make that accurate examination per vaginam that I wished. I could, however, ascertain that the os uteri was in a small degree dilated. The circumstances were so urgent that I could not defer the use of means till I could procure a consultation. Her strength was rapidly wasting, pulse small and frequent, breathing laborious, and countenance ghastly. The ergot presented itself to my mind as the only probable means of saving her life. I mixed thirty grains in a small quantity of warm water, and gradually insinuated a tablespoonful between her teeth, worked it into her mouth, and in two or three minutes she had swallowed it. The effects were almost instantaneous and truly astonishing. Her spasms gave way, the operations of her mind became regular, and she awoke, as she supposed, from a disturbed and painful sleep. She complained of much weariness. A strong cup of tea was given her with some light nourishment, and she soon fell into a quiet sleep. In the evening following, true and forcible labour-pains came on, and I delivered her in a short time with perfect safety."

III. When, in the early stages of pregnancy, abortion becomes inevitable, accompanied with profuse hæmorrhage and feeble uterine contractions.

IV. When the placenta is retained from a deficiency of contraction.

V. In patients liable to hæmorrhage immediately after delivery.

In such cases the ergot may be given as a preventive, a few minutes before the termination of the labour.

VI. When hæmorrhage or lochial discharges are too profuse immediately after delivery, and the uterus continues dilated and relaxed without any ability to contract.

I have thus exhibited a general view of the errors often committed in prescribing ergot, of the unfavourable results of such practice, of those cases in which it never ought to be administered, and of the indications which render its exhibition necessary and important. These remarks are derived from actual experience in several hundred cases, and are confirmed by those whose observations have been the most extensive and correct. While there is reason to suspect the influence of prejudice upon the minds of some who oppose its

use, their own statements generally admit their very limited opportunities for witnessing its effects, and in some instances, while using it in their first experiments, on which their opinions were founded, that they grossly deviated from every direction calculated to ensure success.

While the frequent occurrence of such abuses is to be deplored, much satisfaction may be derived from this reflection, that a prudent and judicious use of this article has, in a great variety of instances, contributed to save the lives of the mother and child. That such will continue to be its effects when directed by a discreet, judicious, and experienced Practitioner, we have the most satisfactory reason to infer from past experience, and from the peculiar properties and operation of the ergot.*

VI.

Account of a Case, in which a Water-melon Seed escaped into the Trachea, and in which the Operation of Bronchotomy was successfully performed. By Dr. HORATIO G. JAMESON, Surgeon to the Baltimore Hospital, Maryland.

ON the 2d of August, 1822, I was requested by Mr. S. Stevenson to visit his son, aged between four and five years, on account of a water-melon seed having descended into his windpipe. The accident had taken place seven days previous to this visit, during which time he had not received any benefit from the means which had been resorted to. The child was in a high fever, with incessant croupy cough. I requested the advantage of the opinions of Drs. Jennings and Cromwell.

The child was bled, took several emetics, which had the effect of affording the most decided benefit. The vomitings, by bringing up great quantities of phlegm, relieved his cough and respiration so much, as to encourage his parents to hope that this plan would ultimately succeed in relieving him altogether. For three or four days he would be free from almost any appearance of disease; then he would be threatened with strangulation, and severe and incessant cough would be excited, and continue till he was quite exhausted. Thus he continued upwards of three weeks after I first saw him, to change from a state of extreme danger to one of apparent health, except his gradual loss of strength and flesh. After this period the vomits began to lose their beneficial effects,

* American Medical Recorder, No. 20.

and, ultimately, evidently did him harm. The parents having resisted our advice respecting an operation, I gave them expressly to understand that, unless they consented to it, I would no longer be responsible, nor would I be willing to perform an operation when no hope was left of saving him by it. I requested a final consultation with the gentlemen above named.

On the 31st of August we met, and agreed that, as there was no chance of relieving him without an operation, if the symptoms should not again remit and leave us a reasonable hope, which his situation on that day did not, that then the operation should either be promptly performed, or all idea of it abandoned for ever.

On the 2d day of September, one month after my first visit, and five weeks after the accident, I engaged in the operation. In the presence of Drs. Cromwell, Jennings, Wright, Dickson, and others, I made an incision about two inches in length, parallel with and in front of the trachea, terminating below near the sternum, and above about the middle of the thyroid cartilage. The integuments were much thicker than I expected; that part of the wound over the *rings* to be divided was more than half an inch. Having completed my incision, I passed the point of the scalpel between the thyroid and cricoid cartilages, and cut downwards so as to form a wound through the rings of the trachea of about three-fourths of an inch. Here it may be proper to notice some change of my views growing out of the circumstances present. I had provided myself with delicate forceps formed out of silver wire, hoping, if I could not take hold with the forceps, that, by turning the seed across the tube, I should enable the organs of respiration to throw it out of the wound or through the glottis, and I was not entirely at ease about a risk which I imagined there was of the seed being forcibly lodged in the glottis, and giving us some trouble.

The vessels divided by the knife bled so freely as to induce me to hope that I could derive advantage from this occurrence. I determined to open the wound for a short period, so as to admit blood into the trachea, with a view of forming coagula about the seed, or to stop up the trachea as much as possible, with a view of obtaining a more complete expelling power from the respiratory organs. Finding that my forceps were, though small, still too large for a space so confined as that deep between the sternum and the chin of a child, I resolved to trust to moving the seed, and irritating the lungs with a common probe, believing the coagula would materially facilitate my design. I was not aware that my probe had been taken out of my case, and there being

none at hand, I passed down the forceps with their chops pressed together. The moment I touched the seed, and, no doubt, turned its flat side across the tube, which was somewhat choked with coagulated blood, it was thrown through the glottis as out of a pop-gun, in consequence of the irritation excited by touching the inner surface of the trachea at its bifurcation.

It was instantly perceived that the child was relieved of much of his sufferings; and so sensible was he of what had been done for his relief, that he lay perfectly quiet, and bore the introduction of three sutures without a struggle or complaint. A slight symptomatic fever followed the operation, but there was very little cough, and that was free from the peculiar croupy sound during the presence of the seed. The fever yielded to two or three mild cathartics. At this time, 19th September, the child is in fine health, but a slight sore remains at the wound, in consequence of the sutures having given way before the skin had united, but the trachea closed up perfectly after the first afternoon, at which time a little air passed through the wound.

VII.

Case of Poisoning by Arsenic. By WILLIAM BUCHANAN, Esq., Fellow of the Royal College of Surgeons.

ON the 8th of December last, I was requested by a woman to see her husband immediately—she feared he had taken poison, as he had vomited some white powder, and was in much pain. I found him rolling on the floor, and by his actions expressing great pain at his stomach, and nausea. The matter he had vomited seemed to be chiefly water, but having a considerable deposit, consisting of perhaps two or three drams of powder. He would give no account of it, or of himself. His pulse was languid; his tongue and mouth clean: his skin was covered with cool perspiration. In the course of fifteen or twenty minutes I gave him, in divided portions, a solution of four drams of sulphate of zinc in six ounces of water. As this was much against his will, some of it was lost, but three drams of the salt were taken, before free vomiting took place, when two or three more drams of the powder were brought up. Until this time no other fluid had been given—it was not easy to get him to take what was judged the best remedy, the emetic, and it was thought the giving of fluids might increase the activity of the poison. Now that vomiting was frequent, he was allowed warm

Mr. Holbrook on the Treatment of Retention of Urine. 000

water, and no more of the white powder was present when it was rejected. He took some cathartic pills, and half dram doses of pure magnesia, a course of practice recommended by Mr. Hume, with whom it had been successful. I was not aware of its manner of operation, except it might render the arsenic, or white lead, less soluble, and one of these substances, from its gravity (the only means I then had of estimating it), I judged it to be. On examining the powder, of which I still possess a quantity, I had no reason to doubt that it was the white oxyd of arsenic. I sublimed some; I formed Schele's green with copper by another part, and I was satisfied of its garlicky odour on being heated. My patient took seven or eight half dram doses of the magnesia—his vomiting ceased soon after its first exhibition—his bowels were soon well cleared, all pain rapidly subsided, and on the next day he had no other complaints than might be fairly attributed to the soreness produced by vomiting, and the distress resulting from his conduct. Since so much of the case was penned, I have had an opportunity of ascertaining that he obtained at a druggist's in the neighbourhood an ounce of arsenic: he mixed it with milk and water, and swallowed very nearly the whole. In about half an hour vomiting began, and a few minutes after that period I saw him. It is assuredly a curious circumstance, that so large a portion of so violent a poison (and its genuineness has been ascertained by a reference to the druggist who dispensed it, and by the examination of Dr. Babington) should have been taken into the stomach and not have produced more serious effects;—it is not for me to say what share in preventing it should be attributed to the full, free, and almost dry vomiting induced, or what is the probable value of magnesia as an antidote; my object in giving this recital having been merely a statement of the facts.

5, Finsbury Terrace, March 13th, 1823/

VIII.

On the Treatment of Retention of Urine. By JAMES HOLBROOK, Esq., Fellow of the Royal College of Surgeons, London, and Surgeon in the Royal Navy.

[In a Letter to Dr. COPLAND.]

FROM the experience I have had in cases of obstruction to the passage of the urine from the bladder, I am of opinion the good effects of active purges are not sufficiently attended to; I shall, therefore, be obliged by your inserting the fol-

lowing remarks in your valuable and widely circulated *Repository*, if you think any advantage likely to be produced in practice, in these cases, by calling the attention of Surgeons more particularly to the utility of this mode of treatment. I am aware, however, of my inability to make these observations with full effect, and I shall not attempt to do more than briefly to describe the circumstances under which I have found this treatment most useful.

The most usual cases of obstruction of urine, to which I have been called, have been in persons advanced in life, who have generally laboured under an affection of the prostate gland, and others who had stricture in the urethra; the immediate attacks being generally produced by cold, or excess in drinking, and commonly of cider; which, in my experience, has appeared more liable to affect the urinary organs than liquors of any other description. In these cases I should conclude a spasmodic state of the muscles which surround the urethra to exist, accompanied with fulness of the vessels about the neck of the bladder, and probably with a relaxation of those of the bladder itself, lessening its power of contraction; and perhaps it may also be added with propriety, a congestive state of the vessels throughout the whole intestinal canal, particularly about the rectum; the latter being more immediately liable to produce direct influence on the urinary organs, and parts surrounding them, than is frequently supposed.

In these cases, I have commonly found the patients complaining of pain and tension about the lower part of the belly; pain across the loins, with desire to pass urine, without the power; sickness; some degree of fever; and frequently stupor, particularly in elderly persons. A common practice in these cases I know to be, if the catheter fail to be introduced, the immediate recourse to the warm bath, the exhibition of an opiate, and perhaps an opiate glyster; and if this fail, some leeches are then applied to the perineum; or, if the patient be of a full habit, blood is perhaps taken from the arm. All this time, the bowels are often totally neglected, or if any thing is done in that way, a little castor oil has been exhibited, under the mistaken fear of adding to the irritation by more active medicines, and thus, in these cases, as well as in many other surgical diseases, the attention is too much confined to the local affection. Patients under this treatment certainly do frequently recover, but not, in general, until the whole system has been greatly exhausted, and relaxation of the spasm is in consequence produced. Frequently, in these cases, the urine follows the withdrawing of the catheter, after an attempt at its introduction, which, by

producing the sensation of the passage of the urine, removes the spasm, owing to the sympathy which exists between the fore part of the urethra and the neck of the bladder. If, then, the urine has been known to pass from the sympathetic effect of simply withdrawing a bougie or catheter from the fore part of the urethra, how much more powerful must be the effect of calling into action all the combined powers for evacuating the contents of the bowels, which are so much accustomed to act together with the urinary organs, that we find it impossible in the healthy state to evacuate per anum, without also, at the same time, emptying the bladder? Instead, therefore, of trusting solely to the above soothing mode of treatment, if recourse is immediately had to a full dose of calomel, combined with a little extr. papav., followed by a purgative mixture, repeated every two or three hours, until the bowels are thoroughly cleansed, both from the residue of the ingesta and foul secretions (some blood being previously taken from the arm, if the patient be of a full habit, or symptoms of inflammation appear), I am convinced, from repeated experience, that complete relief would, in most instances, be procured in a few hours, provided too much time has not been lost before the means was employed, and, even then, a better chance will be afforded for the full effect of other remedies. Under these circumstances, the warm bath should be had recourse to, and, whether bleeding has or not been premised, leeches should be applied to the perineum, frequent injections of glysters of warm water used, and opium administered, both internally and in the form of glyster, mixed with milk. When, from long distention, the bladder has entirely lost its power of contraction, if the catheter cannot be introduced, there only remains to puncture the bladder.

If we succeed in introducing the catheter in such cases, I have always found the use of brisk purges more serviceable in producing the return of contractile power in the bladder, than tonics and stimulating medicines, except in very weakly subjects, and even in those the occasional exhibition of a moderately active purge is beneficial.

There is one remedy which I have used a few times in cases where spasm appeared to be the principal cause of obstruction, and which, I think, has been of some service; which is, the external application of the belladonna, in the form of fomentation of a decoction of the leaves, over the pubic region and perineum, and also the infusion in glyster, in the proportion of twelve grains of the dried leaves to six ounces of boiling water, given at once.

Monmouth, 1st March, 1823.

IX.

Example of a remarkable Fact in Midwifery. By JAMES SCOTT, Esq., Surgeon, Westminster.

He that adventures the "*explere animum alicui*" upon the phenomena of intricate or obscure facts, accepts a chance, in which reputation is the stake: hence, as I have neither ambition to court admiration of wisdom, nor humility to support the opprobrium of folly, I shall detail, unaccompanied by theory or hypothesis, the following fact, revived in my memory by reading an article, relating to midwifery, in the last Number of the MEDICAL REPOSITORY.

In January, 1818, my attendance, during labour, was requested upon the wife of Mr. Dunn, Surgeon of the Herefordshire militia. The head of the child had made its turn in the pelvis (the face lying in the hollow of the sacrum), and the membranes had broken, when the feeble cries of the infant called the attention of the persons present. The mother conceived that the head of her infant had emerged from its foetal existence, while others believed that delivery had taken place: subsequent pains propelled the head to the outlet, during which the voice of the child was again heard, and the os externum becoming sufficiently dilated, delivery was effected, *twenty minutes after* the first cries of the infant were emitted.

I would beg leave to remark, *en passant*, in reference to a passage in the article above alluded to, * that "it is a principle in hydrostatics, that a solid body placed in a fluid displays a quantity equal to its bulk," that it must be understood a body is inferred, whose specific gravity is greater than that of the fluid; for a solid body lighter than the fluid displaces a quantity equal to its weight.† The consequence

* REPOSITORY for March, p. 238.

† Our correspondent should be aware, that the assertion, "a solid body placed in a fluid displaces," &c., is by no means open to the objection which he urges; because, 1st. no one can attach to the words, "*placed in*," the same acceptation with *floating in*, to which latter term only his objection is applicable; and, 2dly, the method is shown, immediately after the sentence in question, how the lungs may be placed in the liquid whose specific gravity is greater. Our correspondent again mistakes when he supposes that "the silver thread basket" can sink the lungs by its weight: they would require, if at all sound, a massy piece of plate to do so. The net-

of these two principles materially affects the conclusion to be drawn from the experiment of sinking distended lungs, by placing them in a "silver thread basket;" the lungs are specifically lighter than water, but in such case are carried to the bottom by the superior gravity of the silver, when probably they are so compressed by the circumjacent water as to undergo, during immersion, an alteration from their former relative proportional gravity compared with the fluid.

X.

Case of Obstinate Constipation, treated successfully by the Oil of the Croton Tiglium. By WALTER C. DENDY, Esq., Surgeon to the Royal Universal Dispensary for the Diseases of Children.

I AM induced to lay before the readers of the *REPOSITOR* the following brief sketch, not on account of any novelty which the case presents, in a pathological point of view; but as it adds an additional testimonial of the very superior effect of the oil of the croton tiglium under similar circumstances of disease to those which characterised the following case.

I was lately requested by a medical friend, in the vicinity of Hatton Garden, to see a young woman, aged sixteen years, whose bowels had been in a state of complete constipation, for three weeks, during which time various purgative medicines had been administered by this gentleman: in fact, he had tried all the common remedies for obstructions of this nature, together with the warm bath and enemata. According to her own account, she had swallowed, previously to the

basket is only the means by which the immersion is more readily and completely accomplished.

With respect to the concluding criticism, in our correspondent's last paragraph, we must observe, that the lungs, although gently compressed by the fluid in which they are thus immersed, are by no means so much diminished in their apparent bulk as might be expected; nor is the air, even that contained in the large bronchial tubes, displaced during the experiment, if the position of the lungs be at all attended to during its performance. Indeed, it is no easy matter to expel the air from lungs that have respired. Without, however, wasting time and space in proving this, according to physical principles, we appeal to the facts. Make the experiment. — J. C.

means used by this Practitioner, and immediately before his assistance was required, about three-fourths of an ounce of powdered jalap, two ounces of castor-oil, and a box of Scots pills, in different trials at obtaining an evacuation, without the least effect.

When I saw her, the febrile symptoms were very high — the abdomen was much tumefied — pain very much increased on pressure — the tongue loaded — countenance flushed — intolerance of light — throbbing carotids, and other symptoms of cerebral disturbance. In order to relieve these last symptoms, leeches were applied to the forehead and temples, and acetic lotions to the head. Half a drop of the *ol. crotonis tiglii* was ordered to be taken every third hour; and after the third dose it was combined with a mixture of the *ol. ricini*. The contents of the bowels were profusely evacuated, consisting of scybalæ, and afterwards of fœtid bilious motions. She took little else, as the symptoms were immediately relieved, — and she was convalescent in a day or two.

It may be a matter of surprise to many, and a subject which may appear to others deserving of inquiry; how the numerous purgative remedies, which were administered during so long a period of complete constipation, could be disposed of by the digestive economy of the individual, without either producing their usual effect on the one hand, or a deleterious influence on the other. No doubt, much must be ascribed to the powers of the digestive organs upon the substances thus submitted to them; and much of their active ingredients must have been changed by these powers, while the same or others of their constituents must have been more or less absorbed, either changed or otherwise, and afterwards discharged from the circulating mass, by means of the kidneys, and of the other excreting parts of the body. It was not, however, my wish to attempt to solve difficulties, but to state a fact.

Great Eastcheap, February, 1823.

PART II.

ANALYTICAL REVIEW.

I.

1. *A complete Treatise on the Nature, Symptoms, and Cure of Lues Venerea, Historical, Theoretical, Practical, and Original. A new Edition, amended and corrected.* By JESSE FOOTE, Esq., Surgeon. London. 8vo. Pp. 420.
2. *Facts illustrating the Effects of the Venereal Disease on the Fetus in Utero, and the Modes of its Communication.* By WILLIAM HEY, Esq., F.R.S., &c. &c., of Leeds; communicated in a Letter to JOHN PEARSON, Esq., F.R.S., &c.; read June 25th, 1816. *Medico-Chirurg. Transactions*, Vol. VII. p. 2.
3. *Remarks on the Opinions of Mr. HEY, by Mr. PEARSON; Appendix No. II. to Life of WILLIAM HEY, Esq.* By JOHN PEARSON, Esq., F.R.S., &c. London, 1822.
4. *Dictionnaire de Médecine, Tome V. Paris, 1822. Article Chancere.* By L. V. LAGNEAU, M.D.

THE researches of the indefatigable Astruc resulted in the conviction that lues venerea was a new disease, which first made its appearance in Europe about the year 1494. He found that, immediately after the above period, writers expressly and exclusively treating of this disease were numerous, and that the greatest unanimity prevailed amongst them in the opinion that it had newly appeared in Europe, and was totally unknown to their predecessors. His zeal in the inquiry after the origin of lues led him to compose a chronological index, including a brief analysis of the works of authors who had written on that disease exclusively, and carrying it down to the end of the seventeenth century. He was unable to discover a single work treating separately of lues, prior to the period above named, and whatever apparent allusions to its symptoms were to be found in older writers, were so indistinct and questionable, so inconsiderable in amount, compared with the full narrations of writers after this date, that the conviction affected him irresistibly.

Since the time of Astruc others have engaged in the same search, and some have arrived at very different conclusions. Collecting from all ancient authors every expression which could be supposed in any way to allude to individual or aggregate symptoms of the disease, they have amassed a pretty considerable bulk of quotations, which they seem to think sufficient to prove satisfactorily, that it is a very ancient disorder, which has prevailed in all countries since the origin of history.

Equally discordant opinions have been entertained respecting the distinguishing characteristics and the most eligible plans of treatment; so that the subject has long been held one of the most complex and difficult in medical science.

Among authors of our own country, who entertain opposite opinions upon the historical question, but who are far less at variance on the subject of treatment, two are now living, who many years since published works upon the disease, and, after a period of more than thirty years having elapsed from the first publication, have within a short time reissued these works for the examination of the rising generation of Surgeons. Dr. Swediaur and Mr. Jessé Foote have, perhaps more than any of their cotemporaries, devoted themselves to the investigation of the history, nature, and cure of syphilis, and have, for a longer period than falls to the lot of many inquirers, had extensive opportunities of observation. The work of the former has been reviewed in the *REPOSITORY*, and we now propose to analyse that of Mr. Foote.

Great prejudices have been very generally entertained against the writings of this gentleman, principally, we believe, originating in the observation of his hostility to the late Mr. Hunter, whose popularity has been so great, that to question the accuracy of his opinions has been to incur a species of odium with the great bulk of the Profession in England. We shall not be accused of disrespect for our revered pathologist, however, in endeavouring to make farther known some very ingenious opinions of one whose feeling of hostility must now have ceased, and who seems to come forward to republish those opinions because he believes them likely to serve his fellow men.

No two men could differ more widely than did Mr. Hunter and Mr. Foote, especially on the subject of the work before us. In the outset, however, their opinions are little at variance. Mr. Foote, following Astruc, is of opinion that the venereal disease, pre-eminently so called, otherwise *lues venerea*, or syphilis, is a disease of modern origin in Europe, that it was imported by the discoverers of America; conveyed by the Spanish soldiers to Naples, and dispersed over the

greater part of Europe by the soldiers of different countries, assembled at the siege of that place. Mr. Hunter believes it to be of modern origin in Europe, but does not attempt to determine whether or not it came from America. Dr. Swediaur has considered the subject more fully than the latter, but, in our opinion, he is by no means successful in disproving the modern rise of this disease. He takes great pains to prove that it was known a few years prior to 1494. But supposing that it were not imported from America, but might be introduced from Africa by the Moors and Spanish Jews, we still have abundant proof that in Europe it had not been long common, for prior to 1494 not a single volume had been published on the subject, but between 1494 and 1536 many works, expressly and exclusively treating of it, were published, and the writers of these works uniformly speak of the disease as new.

Quitting, however, the historical question, though by no means considering it as trivial, or unworthy of being fully canvassed, we pass on to some points on which our readers will find greater satisfaction if their doubts and perplexities can be cleared or removed.

"*Lues venerea*," says Mr. Foote, "appears to be a poison *sui generis*, a poison peculiar to the human subject;" and farther, "there is no disease which ever was defined, so full of variety as *lues venerea*."—"In order to account for the venereal action on the various parts, both local and constitutional, we must consider the quality of the parts on which it is acting; we must consider that venereal infection has the singular power of acting on every component part of the body."—"It is owing to the uncommon subtilty of venereal poison, and the power which it has of attacking every component part of the body, to the *irregular* action of the poison on each part, in point of *succession*, to the length of time it will remain without discovering itself, to the progress of it not being definable under any *fixed periods*, to its assimilating on various parts to other diseases which such parts are liable to, that so many disputations have engaged authors, so many erroneous opinions have been given, such various theories have been adopted, such contradictory practice in the treatment of it has been suggested, such false conclusions drawn, and such impositions on credulity practised."

Having premised these remarks, he goes on to state his opinion, that —

"Gonorrhœa and chancre are both the result of venereal poison acting on parts, under different modifications." "The cause of both symptoms," he says, "is the same, and the effect will be corresponding to the anatomical nature of both parts: venereal fluid, applied to the urethra, produces a discharge of mucus; that fluid, lodged on the cutis, produces a chancre."

The history of the disease militates somewhat against this opinion, for Fallopius asserts that the gonorrhœa was unknown, as a symptom of lues, till about the year 1545; and, according to Astruc, all writers upon the disease, whose works appeared before that time, are silent respecting this symptom. Again; the quotations which have been brought in evidence of the antiquity of the venereal disease refer to an affection having some of the characteristics of gonorrhœa.* Mr. Foote, however, explains away these opposing circumstances, by observing, that Surgeons, when the venereal disease first appeared, must have been familiar with discharges from the urethra and vagina, arising from other causes, and that this very familiarity prevented their perceiving, at once, the connexion between this symptom and a venereal cause.

“ And as they did not at first annex the symptom through ignorance, so did they afterwards annex it through information. If they had first of all annexed it through ignorance, and afterwards rejected it through information, then the case would have been widely different: for it would have been apparent, they were apprised of the fact from the very beginning, had weighed it, and had decided to reject it. But from the very first time that gonorrhœa was adjudged to be an increased discharge, flowing from the urethra, in consequence of venereal infection, and was considered as true a symptom on that part as a chancre was on another part, that fact has not, until very lately, been resisted. In the whole of the historical tracts on lues venerea, which have been written year after year, that fact, so far from being doubted, has been always established.”—P. 39.

Various experiments have been instituted to determine or to disprove the identity of the poison producing gonorrhœa and chancre. They have been performed upon a small scale only, by individual experimenters, and each seems to have arrived at the conclusion he anticipated. We shall see presently how Mr. Foote explains their failing to be satisfactory; why he appeals to observation of the natural occurrences of the disease as the best source of accurate opinion, and how strikingly recent observers have confirmed his remarks.

After a caution to Practitioners not to decide upon the innocence of a discharge, the effect of protracted gonorrhœa, and a little sarcasm or two on the loose opinions of Mr. Hunter respecting the question of when infection *could* be feared, he examines these experiments and their results, first defining gonorrhœa to be “ a virulent discharge of fluid from the

* William Becket, in Vols. XXX. and XXXI. of *Philosophical Transactions*, quotes several English surgical writers to this purport, scraps from numerous foreign authors have been collected by others, and even the Bible has been referred to in support of the opinion.

urethra in man, and vagina in woman;" and chancre, "an ulcer on any part of the penis of a man, or labia of a woman; or on any other part of the cutis or cuticle, where the venereal fluid, which is necessary to infect, has been so lodged as to produce that effect."

The question is : —

"Whether the *infecting discharge* from the *urethra* is capable of producing a *chancre* on another subject — or whether *chancreous* discharge is capable of producing a *gonorrhœa* in another subject — or whether a subject having a *chancre*, can infect another with a *chancre* and *gonorrhœa* — or whether a subject, having a *gonorrhœa*, can infect another with a *chancre* and *gonorrhœa*? Whether these two symptoms be produced from virus, the *same* in its nature, but only acting on two different anatomical parts — or whether the virus which produces them be not of a *different* nature, so that *gonorrhœa* from one cannot produce chancre on another; nor can chancre from one produce *gonorrhœa* on another."—Pp. 43 and 44.

One experimenter applies the matter of *gonorrhœa* to the *glans penis*, and produces no chancre, but another succeeds in producing a chancre by the same application. A similar disparity of results attends the application of *chancreous* matter to the lining of the urethra. Mr. Foote observes, "We are not told by them whether the experiment was made on the *same* subject or on *others*," and he afterwards contends, that the matter of the *same* subject will not act upon that subject to produce either symptom, agreeably to a law hereafter to be considered. The experiment may fail, too, from various causes, and its failing even many times will prove nothing; but if it once succeed, the question is at an end, provided the accuracy of the observation be duly attested. Mr. F. goes on to examine the natural evidence of what each matter can produce, and from observation of the appearance of chancre on men who had been infected by women having *gonorrhœa* only, is satisfied that this matter can produce chancre, and that the cause is identical in the two varieties of local symptom. The confirmation of his opinions to be derived from recent observations is afforded by a work of Dr. Hennen (*Principles of Military Surgery*), in which, after remarking that "soldiers are gregarious in their amours," and that, of several connected successively with the *same* woman, "*some have had one kind of sore, some another, and some both*," he gives in a note the following curious case from Vigarous:— "Of six young Frenchmen who had connexion successively with the same woman, the first and fourth in the order of connexion had chancres and buboes, the second and third *gonorrhœa*, the fifth chancre, and the sixth bubo;—[Vigarous, *Oeuvres de Chirurgie-Practique, Civile et Militaire*, Mont-

pellier, 1812. *Complication du Vice Vénérien*, page 8 ;” —] and adds, “ I have had an instance of three individuals similarly circumstanced; the first escaped, the second had true chancres and elevated sores, the third had gonorrhœa. The connexion took place within an hour.”* Mr. Evans, too, relates one case, at least, in which the sore, which he terms *venerola vulgaris*, and gonorrhœa, were successively produced in the same gentleman by intercourse with the same woman; and remarks: “ In this case, then, we see *both* *venerola vulgaris* and gonorrhœa take place in the same person from the same cause.”† We observe, by the way, though out of place, that this said *venerola vulgaris* is followed by secondary symptoms *occasionally*; that it occurs in so many “*spurious forms*” from various causes; that its “*gradations*” are from “*the purer form*,” particularly described by Mr. E., “*downwards, until ALL its peculiarities are lost in the superficial ulcerations ranked under the head of excoriations*,” and that on the effects of mercury depends almost entirely its diagnosis.

A difficulty presents itself to Mr. Foote which has occurred to others. If the poison producing chancre and gonorrhœa be the same, why is it that a man may have a chancre without a gonorrhœa, and a gonorrhœa without having a chancre?

To illustrate the law of the action of the venereal virus by which the difficulties in the way of his opinion being substantiated are chiefly removed, Mr. Foote states the order in which several primary appearances of the disease occur, influenced by the character of the parts on which they appear.

“ When,” he says, “ a person has contracted both symptoms from the same connexion, gonorrhœa will be the first to betray the infection — the corona glandis, frænum, and the internal part of the prepuce, will be the next — and the cutis, or the external part of the prepuce, will be the last. I have known the space of time between the appearance of gonorrhœa and that of chancre on the cutis of the penis to be three weeks; and yet as there was but one connexion to produce both, I am confident the one did not arise out of the other; but the true cause of the distance of periods between them was, that it would take but a short time for the venereal stimulus to produce a discharge from the urethra, and a longer time for the same stimulus to produce a chancre on the cutis; and also, that it would take an intermediate time between the former and the latter for the same stimulus to produce a chancre on the glans, internal part of the prepuce, or frænum.

“ When all these symptoms do appear from one infection, such is

* Hennen’s *Military Surgery*, p. 526.

† Evans on *Ulcerations of the Genital Organs*, p. 80.

the general order of their appearance: I say general, because I do not suppose but there might be exceptions. It is also very well known to those whose practice affords them the opportunity of obtaining that knowledge, that a gonorrhœa is the most general first symptom, when it comes on alone; that chancres on the frœnum, and internal part of the prepuce, are the next most in common; and that chancres on the external part of the penis, and parts adjacent, are the most uncommon. Why this difference is found, it is not owing to the virus from the woman not coming into contact with the one part more than the other, but to the difference in the construction of those various parts — to the more susceptibility of the one than the other — to the one being more disposed to be stimulated by the virus than the other — to the one being capable of being acted upon by the virus when the other may not — to the virus being lodged and remaining undisturbed — to the faint power which the virus might at the time possess when the infection was given — or to the difficulty there is in the subject, who is infected, to be infected.

“ For if a man be connected with a woman who has a gonorrhœa, every part of the penis may be presumed to take up the moisture; but as the cutis is more difficult to be infected than the cuticle, and the cuticle than the urethra; and as the fluid lodging on the external part of the penis is more liable to be wiped away, so does it happen that that part is the most exceptionable. The urethra being a part liable to be stimulated by a stimulus which would not stimulate the skin, is, of course, liable to be stimulated by a power which in its nature may be too faint to stimulate or act on the prepuce: besides, the natural formation of the urethra prompts it to throw off any thing which is obnoxious to it; or, at least, it is readily prompted to discover whatever produces an irritation upon it: and therefore, also, it might very naturally be inferred, that if there be stages of the gonorrhœa when the power of the infecting fluid is weaker, and less active, the urethra, from its nature and construction, will be liable to be acted upon by it, when other parts cannot.”—Pp. 53 and 54.

By the power of the virus being faint, Mr. F. means, that if a chancre be nearly healed, or a gonorrhœa be past its height, the matter produced by either has, he believes, lost its virulence in part, and will be incapable of affecting with the disease the parts most difficult to affect, yet will retain power to act on the urethra or other part of next degree of susceptibility. That morbid poisons undergo considerable changes, corresponding to the period of the disease in the subject from which they are derived, cannot be doubted, since vaccination has put it in the power of every Practitioner to make the remark; and the history of vaccination abounds with proof of its accuracy. Yet though the power of the matter to infect may not be strong, if it does infect, no material modification of the disease is occasioned by that circumstance. If capable of producing the disease at all, it produces it in its usual form, and of ordinary severity; but the capability to

produce may vary. The severity of the disease will depend upon the constitution of the recipient, not upon the condition of the infecting matter.

Mr. Foote having thus shown how one appearance may succeed another, all arising from the same exposure, proceeds in the illustration of his opinion that it is a law of the venereal poison (in common, he seems to think, with other poisons, but certainly not so*); that the matter of the same individual will not produce fresh local symptoms of the primary characters upon himself; that gonorrhœal matter, for instance, will not produce chancre upon the person affected with that gonorrhœa, nor chancre gonorrhœa in him affected with that chancre, nor chancre produce other chancres in the same individual.

"It has been said, and very truly said, that if a gonorrhœa and chancre be found upon the same subject, they do not in their progress interfere with each other; that they appear to be so very distinct, and require such a different treatment, that those who at first suspected them to have not originated from the same virus, will yet, from these observations, have their suspicions more strongly confirmed. If a subject has a gonorrhœa only, I am of opinion that the gonorrhœa will not produce a chancre on the external part of the penis, nor within the prepuce. I will go farther: I am confident that a chancre is never produced from a gonorrhœa of the same subject; and I am also confident that a chancre on the penis will not produce a gonorrhœa on the same subject. This may, in the opinion of some, be still widening the difference in the nature of the two fluids, which, according to my theory, ought to be united. I will go farther, and say, that I have seen a chancre destroy almost the whole of the *glans penis*, without bringing on a gonorrhœa; and I have seen a gonorrhœa produce a swelling of the penis — an excoriation and discharge upon the glans — an abrasion of the whole surface withinside of the prepuce, without there being the least appearance of a chancre.

"If the virus from a chancre could produce chancres on the same

* Vaccine virus, taken before the sixth day, will produce new vesicles on the person from whom it is taken, and these will be expedited in their progress through the usual stages as the constitution becomes influenced from the original insertion. Yet though this be an exception to the law of infection which Mr. Foote aims to establish, it is one which ultimately gives support to his opinion, as of general application; for it would appear, that whenever the infecting matter is by nature unconfined to the part in which it is generated, it does not possess the power of infecting anew the individual producing it; but that such a power of infecting is possessed by matter which, as the vaccine within its vesicle, is naturally confined. So that a natural provision against the inconvenience is made where required, and is not required where it is not made.

subject, then chancres would be found wherever the fluid touched and lodged on a sound part, and the whole of the glans would become a galaxy of chancres. I will state a case for the illustration of my argument. A gentleman that I was attending at the time of my writing this, first of all perceived a chancre on the frænum, and another about the eighth of an inch from the frænum. He had discovered both about three days. On the fourth day, after he applied to me, a pimple was discovered on the dorsum penis, which was observed for three days before the truth of its nature was ascertained. This also proved to be a chancre, and the late appearance of it after the two former was most assuredly owing to its being on the skin, as the two former were more early, by being on parts not clothed by skin. They were all three contracted at the same time. These three chancres never produced a fourth. The two first could not possibly produce the third. The third was quite out of the way of the fluids of the other two; besides, it was discovered too soon after [for]* the other two to be produced by them. I cannot take upon me to say whether the woman who infected this gentleman did it through gonorrhœa or chancre; but I will give my reason why I think he was infected by gonorrhœa and not by chancre — because two of the chancres were about the frænum, and the other at a distance from them on the *dorsum penis*. One chancre could not have produced this infection from the woman — there must have been more — but the fluid from gonorrhœa could effect it with facility.” — Pp. 55 and 56.

In treating of *Gonorrhœa* by itself, Mr. F., unlike some of his cotemporaries, does not choose to employ any new term, though this be not etymologically correct, to designate what every body well knows by the appellation; saying “a word can only convey the name of a thing, but never the full meaning or description of it; and, therefore, if we do but know the thing by a name, that is all we want.” Having discussed the nature of the discharge, which he considers to be mucus, *i. e.* the natural secretion increased in quantity and somewhat altered in quality, but still formed by the same parts, and after the same manner, just as saliva, in a spitting from mercury, is still to be called saliva, though differing in most of its sensible qualities from the ordinary fluid of that name, he then enumerates and clearly describes the symptoms, in the usual order of their occurrence, comparing the effects of inflammation arising from this specific cause with those produced in inflammation of ordinary origin in mucous membranes. This we consider a very useful view of the subject; for though the cause, in the one instance, has generally a more permanent operation than in the other, the effects bear

* We enclose this word between crotchets, believing it to be unnecessary to the sense, which to us it obscures.

a close resemblance in character, and are also alleviable by similar means. When in high degrees of inflammation of the lining of the air passages, for instance, instead of an increased secretion, no discharge whatever is yielded, anti-phlogistic measures are more imperatively demanded; and so in gonorrhœa, if the discharge suddenly ceases, and especially, as is often the case, if retention of urine be attendant, it will frequently be advisable to bleed the patient actively, as well as to employ the more common measures of depletion. Some remarks follow on the *specific* distance of Mr. Hunter. This was one of the points of difference between the opinions of Mr. Foote and Mr. Hunter. Mr. F. considers that, to whatever extent the lining of the urethra is affected in gonorrhœa, to that extent is the inflammation specific, but beyond the length of that membrane some of the symptoms may be the effect of that specific inflammation of the mucous membrane. The state of the case appears to be this. Inflammation is produced in a mucous membrane by a specific cause, which empowers or compels that membrane to furnish a secretion capable of exciting similar inflammation in the mucous membrane of another subject. That, in mild cases, the extent, it would appear, to which the membrane is excited to the production of such infecting secretion does not exceed two inches or thereabouts; but there is every reason to believe that, in other and more severe instances, a more extensive portion of the membrane is inflamed to the degree of furnishing an increased secretion, which no one can prove to be incapable of producing gonorrhœa in another subject, and which, as there is no natural line of demarcation, nor any apparent barrier to the extension of effect, nor any visible difference of quality or office of parts, which could in any way account for such a difference as has been supposed to exist, must by plain-thinking men be presumed so capable; and that therefore the other parts of that membrane must be included within the bounds of parts affected specifically, when at all affected by the disease.

We extract Mr. Foote's "*theory of chordée*" as a specimen of his ingenuity in explaining the phenomena of the disease to which he has paid so much attention:—

"The chordée is certainly produced from an inflammation of the substance of the urethra, from the inflammation having penetrated beyond the surface, and affected the corpus spongiosum urethræ. The corpus spongiosum urethræ being inflamed, becomes painful and tumid, the circulation is impeded in it, and the power of extension restricted. The corpus spongiosum urethræ, in a state of health, confirms and corresponds in action with the corpora cavernosa penis. When the corpora cavernosa penis are in a state of flaccidity, so is the

corpus spongiosum : and when the blood is thrown into the *corpora cavernosa*, so as to increase their bulk, and cause thereby an erection of the penis, the *corpus spongiosum* also receives its share of sanguineous aid, and completes the intention. This is often the effect of the will, often the consequence of venereal reflection, sometimes an act from the heat of the bed, from an inflammation of the part, and from a stimulus on other parts which correspond with the penis. It is a venereal stimulus from a mental idea which produces an erection in a state of health — and it is an inflammatory stimulus of the parts which produces the erection in a state of disease.

“ In this instance of chordée, the *corpus spongiosum urethræ* is so highly inflamed, that it cannot bear distention, and it is the act of distention which produces the pain that is felt; for the *corpora cavernosa*, not at the same time inflamed, are capable of their usual distention; but when the blood is flowing into the reticular substance of the *corpus spongiosum*, the vessels of it are found to be inflamed, tumid, and too much loaded; the effort, therefore, cannot be even attempted, without producing great pain, and without sometimes lacerating the reticular substance, from which a considerable hæmorrhage ensues, and which is, in general, found to be a relief. It is when the *corpora cavernosa* are swelled with blood that the compression of them upon the *corpus spongiosum* produces a feeling as if the penis was strongly squeezed between the finger and thumb. This is my theory of chordée.”—Pp. 76, 77.

Phymosis from gonorrhœa, *paraphymosis*, and *swelled testicle*, are next treated of, and Mr. Hunter is accused of having omitted to mention the two former as occurring in consequence of gonorrhœa. Mr. H. has, indeed, placed the account of them which he gives among the occurrences which are effects of chancre, and as such they certainly often enough present themselves; but he has expressly stated that they do happen “sometimes in the common gonorrhœa,” as well as in that of the glans and prepuce, and with chancres, “but most frequently of all from a chancre in the prepuce.” Both these gentlemen, in more or less direct terms, speak of these symptoms as inflammatory, but neither of them, in our judgment, sufficiently considers that they ought to be treated simply as inflammatory. Mr. Hunter’s practice has the faults of the surgery of his day, which, looking upon every symptom of the disease as requiring the application of the specific, mercury, never employed sufficiently active measures to reduce the attendant inflammation.* Mr. Foote’s is certainly a considerably improved practice. He bleeds freely in the arm if the case be severe, or with leeches if mild, uses a spirituous

* On this subject we recommend to our younger readers the perusal of Mr. Travers’s essay on phymosis and paraphymosis, in the first part of his and Mr. Cooper’s *Surgical Essays*.

fomentation and poultice, to which spirit of wine has been added. He also *forbids* what Mr. Hunter *recommends*, the washing of the inflamed prepuce and glans with the patient's own urine in the act of voiding it. Both of them seem much too ready, when chancre exists, to commence the introduction of mercury. Upon the whole, however, Mr. Foote's practice much more nearly approaches what we humbly conceive to be the best, that of treating the affection, till the swelling is upon the *decline*, as purely inflammatory, especially by the employment of spirituous lotions with rags to envelope the whole penis, and the injecting of warm water or milk and water beneath the prepuce, to wash out the discharge and dilute every drop of urine which may unavoidably lodge upon the parts. To this end Mr. F. directs that "the patient should always urinate with the penis in warm water, to wash away the urine confined within the prepuce."

Swelling of the testicle.—The period and the progress of this symptom are very distinctly described, but it is unnecessary for us to enter upon those particulars. We pass over them and Mr. Foote's strictures on the word *sympathy* as employed by Mr. Hunter. From observing that one testicle only is in general affected, and that even in very severe cases of gonorrhœa, the inflammation of which has extended the whole length of the urethra, not uncommonly the testicles both escape, if the patient be guilty of no imprudence, Mr. F. thinks "there is a difficulty in the effects of a swelling of the testicle being brought about."

"I am, therefore, of opinion, that the orifices of the vasa deferentia, which open into the urethra, are shut against the effects of all stimuli; and that it is from accident alone venereal stimulus can possibly be admitted. But if it once gain admittance, I am of opinion that the venereal stimulus can act as well along the vas deferens, as it does along the urethra; and that it is the positive presence of the venereal stimulus which produces an inflammation on the internal canal of the vas deferens, and which proceeds to the epididymis, and affects that and the testicle. If virus can pass through lymphatics, by what is termed absorption, there is no difficulty to presume that it may pass along the vas deferens by capillary attraction. And I am also of opinion, that part of the discharge which follows a swelled testicle, and to which a swelled testicle from a venereal cause owes its restoration to a sound state, flows through the vas deferens, and that it is poured from thence into the urethra.

"It does not follow, from this mode of reasoning, that this discharge should carry with it any different mark from that which flows from the urethra; for an increased stimulus upon the internal membrane of smaller tubes will produce an increased discharge from them, alike as it does from the urethra. The more the discharge which follows the swelled testicle, the sooner will the testicle go

down: and this is a reason why a swelling of the testicle, from a venereal cause, in general subsides sooner and safer than a swelling brought on from any other cause, and where no discharge follows. I am also of opinion, that when the venereal stimulus gains admittance within the orifice of the vas deferens, the progress of the inflammatory symptoms are slow there, as they are through the urethra after a gonorrhœal infection has been first received.

"From the above statement of the cause of a swelled testicle, I think we have been able rationally to account for the various circumstances attendant on the swelling of the testicle brought on by gonorrhœa — how it happens that sometimes, notwithstanding long and great inflammation in the urethra, the testicle is not affected at all — how it is from accident when it is affected — how one may be affected without the other — how that affection may come on after inflammation in the urethra has subsided — and how its own cure consists in the return of the discharge."—Pp. 93—95.

In the treatment of this symptom it is necessary to suspend all the means which might suppress the discharge. If the case be slight, and the discharge continue, cooling lotions, the recumbent posture, and a suspensory bandage, may be used. If severe, general and topical bleeding (we should say the latter, employed more largely than is commonly done), fomentations and spirituous lotions, poultices and suspending the testes, keeping constantly in bed, James's powder with opium at night or an emetic, constitute the chief resources in recent cases, and camphorated mercurial ointment and poultices are very effectual in those which are protracted cases.

"*Gonorrhœa of the eye* is one of the most acute, inflammatory, painful, and destructive attacks which can be endured: in comparing it with the whole class of acute diseases that locally affect human parts, I am not able to recollect another equal to it in rapidity, torture, or destruction."

Mr. Foote goes on to contend against the opinion which ascribes it to metastasis, though he is ready to admit, that at the period of its greatest severity the symptoms of urethral affection will be moderated, as are those of inflammation in one organ when another becomes severely inflamed. In two cases which this gentleman witnessed, "the discharge from the penis was not discontinued, but the (urethral) inflammatory symptoms were not high." Mr. F. is firmly of opinion, that every instance of virulent gonorrhœa of the eye, for we presume a milder affection which occurs in particular individuals every time they have an urethral gonorrhœa, and which does not seem to endanger the eye, he might consider as a distinct affection, connected with peculiarity of habit; but every virulent gonorrhœa of the eye, he thinks, arises from the application of the matter of *another* subject, and

that this alone can account for the rarity of its occurrence, and for its being, in general, confined to one eye. This opinion is in accordance with his general belief, on the powers of matter to infect another, but not to produce fresh local affection in the subject which generates that matter, which we have endeavoured to make known, from our own conviction of its rationality and truth. One of the cases which the author has witnessed is here detailed, but our limits compel us to abstain from making an extract of it. In a note Mr. Foote gives it as his opinion, that the ophthalmia of Egypt, with which our soldiers were affected, and which they spread among their comrades on their return to England, was of the nature of gonorrhœa of the eye, and was propagated by contact, the soldiers sleeping together, washing in the same basins, and wiping with the same towels.

Gonorrhœa in women is next considered. In the female sex it is a more simple disease, from the formation of parts affected; and one of the chief difficulties attending its consideration is that of saying when the subject who has once been affected with the disease can be pronounced to be actually free from it. Mr. F. cannot remove this difficulty, and it is unfortunately too often the interest of the party to effect concealment and avoid detection, so that the imperfect means we have of forming a correct judgment are often partially or wholly withheld, and Surgeons feel a natural reluctance to pronounce an opinion which may be a serious injury to a dependent individual.

The subject of gonorrhœa we must dismiss by a brief statement of the practice of Mr. Foote. The early application of remedies is enjoined, and the best preventive of infection is said to be "the act of urining, and washing the prepuce and glans repeatedly well, and wiping them during that act." As a full bladder is not always at command, the use of a vitriolic injection, presently to be described, is recommended. This, too, used six or seven times a day, is advised, as the best injection, according to Mr. F.'s experience, to subdue gonorrhœa when its symptoms become evident. It is intended to be employed from the very first appearance of these symptoms.

"Dissolve blue vitriol in a sufficient quantity of spring water, precipitate the solution with a sufficient quantity of lixivium tartari (which may be known by the effervescence ceasing)—suffer it to separate, and pour off the clear liquor—then wash the precipitate with warm water, set it by to subside, decant the clear liquor, and repeat the process with fresh quantities of warm water, till it becomes insipid and tasteless, at least of the salt—then filter the solution, and reserve the precipitate. Dissolve as much sal. volat. sal. ammon. in

distilled water as it will take up, and filter it. Mix as much of the above precipitate with the filtered solution as it will dissolve, which reserve for use.

"This will be found to be a very preferable injection. I do not mean to attribute to it any other effect, than that it possesses a predominant power of extinguishing the venereal stimulus, and can be used where there is a degree of inflammation with more security and success than any thing else. I mean to offer it as a preparation which acts safe [safely] and effectual [effectually]. I mean to be understood in saying, that if it be applied properly in time, it will prevent the gonorrhœa from coming on at all; and if it be applied as soon as a gonorrhœa is discovered, it will prevent a progress of every symptom, provided the patient takes care to inject often, and observes the strictest temperance. Five drops of the fluid to an ounce of water is the proportionate medium for injection. As a preventive, it may be made stronger to wash the parts externally; a dram of the solution to half a pint of spring water is about the proportion."—Pp. 113 and 114.

Another procedure is, however, to be adopted when the symptoms have been allowed to advance, and the whole or a considerable proportion of the membrane of the urethra has become affected. Then injections of milk and water, with the application of the steam of hot water, are proper, and a moderate proportion of mercury, should be administered daily. "Four grains of blue pill, with one of opium," are prescribed, not with a view to the specific effect of mercury, but that these are found to affect the secretion of the mucous membrane favourably, and the little danger of constitutional affection which exists is by them rendered less. Mr. F. "has never known an excess of mercury abate an inflammation of the urethra;" but, on the contrary, has "always experienced the discharge protracted, and the inflammation supported from a wanton, continued use of mercury." If the symptoms increase and become more generally inflammatory, the soothing plan is to be perseveringly continued, and bleeding frequently by leeches in the perineum, the warm bath, fomentations, and James's powder at bed-time, are advised. The mercury and opium are still recommended: we question if with propriety.

The omitting to employ injections very early, or discontinuing them upon the first disappearance of the discharge, is considered to be the cause of symptoms assuming a more formidable character; but when they have become severe, the employment of the very injections which might have kept them down is forbidden. Mr. F. has evidently great confidence in the power of injections, not merely to check discharge, but in the early stage of the disease to moderate and subdue inflammation, but is anxious not to be understood to

recommend them at a period when inflammation has already attained its height. Purging, *continually* employed, is condemned as more productive of protracted cases than any other plan of procedure. For the removal of gleet, bark, steel, and copaiba, are recommended.

In reciting the principal occurrences attendant upon gonorrhœa, we have anticipated the separate consideration of the treatment of each, and embodied the substance of Mr. Foote's practice with the summary of his descriptions. In women the same injection is to be employed, and Mr. F. is "confident that an early attention to consequences, and a timely precaution, will prevent the symptoms of a gonorrhœa from even coming on after an infectious connexion." After careful ablution, the injection is to be employed a few times for the first and second days after exposure to injury. When the symptoms have appeared, injection is still the chief resource. Sometimes violent inflammatory affections proceed from gonorrhœa in women, and these, of course, require active measures.

Chancre. — We have already shown the order of succession in which parts are believed by Mr. Foote to be susceptible of influence from the application of venereal virus made at one and the same time, and his opinion upon this point receives confirmation from the observation of Mr. Hunter, that gonorrhœa commonly appears sooner after the application of the poison than chancre, and that if a chancre make its appearance on the frænum, or termination of the prepuce into the glans, "the disease will, in general, appear earlier; these parts being more easily affected than either the glans, common skin of the penis, or scrotum."*

We also find that sores appearing in each of these parts assume somewhat different characters; indeed, sufficiently so to embrace a very great proportion of the varieties of "ulceration of the genital organs," which have been named and classified by a late writer† as "not to be considered as the primary affection of syphilis," most of which *we* cannot help considering as such, though they may "not require mercury for their cure."

Before describing the characters and the differences which chancres at the present day exhibit, when affecting the various textures of the parts upon which they commonly appear, Mr. Foote endeavours to show that the disease is now what it was when it was first described by European medical writers, and has, at all intermediate periods, been the same. We entertain no doubt of its being essentially the

* Hunter on the Venereal Disease, p. 218.

† Mr. Evans.

same, and admit very readily that sometimes it has been found a most intractable disease, and that in our days it has seemed to become less formidable in its effects, at least in this country, and to the natives of some others, whilst strangers have been violently affected by it. We ask if any contagious disease which is known to have prevailed at different periods, or to have been pretty constantly occurring for ages, has not equally varied in severity from causes which we have not yet ascertained, and which may be placed beyond the reach of human penetration?

We are satisfied that the description of Marcellus Cumanus, as quoted by Astruc, and thence, perhaps, translated by Mr. Foote, together with that of Johannes de Vigo, here inserted, do sufficiently identify the disease then noted with the one still of common occurrence, which we call syphilis; and we are pleased to observe,* that in those days it was found possible to cure primary symptoms without mercury, as our army Surgeons have shown it to be in our time; and that therefore we must abandon what has unaccountably been long supposed a criterion of the nature of sores and other symptoms of a doubtful character, viz. the yielding or not to other remedies than mercury. Astruc's own description is quoted by Mr. Foote; but as we extract the author's account, we must pass by the descriptions by others which he has collected.

"When an incipient chancre is detected on the frænum, as soon as it appears, it will be a little glassy acute sore, smooth and even with the rest of the surface; it will be very sensible of a smarting pain upon being rubbed, or from slipping back the prepuce. And when it is detected behind the corona glandis, at its first appearance, it will be found to have excoriated the thin covering of the part where it is situated, and will appear also either shining, and in a small circumscribed circle, or it will inflame at some distance around it. A chancre, thus seated, will not be so painful as the former. Sometimes there will be many of them appear, at first very distinct, which will in time run into each other, just as though the virus received;

* The following is a quotation from Astruc, who is very faithful, and certainly would not misrepresent an author by needlessly giving an opinion opposed to his own:—"Duplicem distinguebat statum morbi, *recentis et confirmati*. Censebat quidem recenti convenire posse curationem *methodicam* jam supra descriptam quæ obtinebatur usu dictæ legitimæ, alterantium, phlebotomiæ, purgantium, balneorum, stuparum, et linimentorum quibuscum argentum vivum admiscbatur, *quando* ante dictâ curatione iste morbus cum suis doloribus et pustulis removeri non poterat." We could find numerous and more appropriate quotations, but do not consider it necessary.

from uncleanness, had never been washed off, but had acted upon the cryptæ of the sebaceous glands, and had ulcerated the whole of them. When a chancre is found upon the internal part of the prepuce, it will there appear as a little pustule, such as I have described in my quotation from former authors. The cause of its appearance always as a pustule, containing a watery fluid, is, that the thin cuticle which covers the internal part of the prepuce is yet thicker than on the frænum and behind the glans, but nothing like so thick and substantial as the cuticle on the external part of the penis, but yet thick enough not to be destroyed before a chancre upon it may be detected. At the first appearance of a chancre there, it will be found to itch and to smart, and when the cuticle is destroyed, an ulcer will be seen, and the surrounding part will be somewhat thickened.

“The first appearance of chancre, both on the external part of the penis, as well as on the glans penis, will plainly point out what I am endeavouring now to make appear, namely, *that one description will not answer for the appearance of chancre on every part, it will only answer for the appearance of every chancre on parts of the same nature; and still there will be a reference to the previous condition of the natural health of the same parts.* When a chancre appears on the skin of the penis, it will be a red, hard, round pimple, with streaks of red leading from it; it will be in this state for some time, and the parts about it will appear at first thickened, but will harden also by degrees. It will sometimes not open, and yield a discharge for a considerable time after it be detected, and I have known it to remain in this indolent state for more than a month. When it does discharge, it will be a thin ichor, and it will be found to show a strong disposition to ulcerate, and the parts around will inflame and redden. It is neither so smarting as a chancre on the internal part of the prepuce or on the frænum, and nothing like so rapid in its progress as those which I have before described. A chancre on the glans penis, considering how much that part is exposed to infection, is very rare; I mean a chancre not connected with the prepuce, but one which arises solely out of the glans. The cuticle of it will be raised, and a fluid will be discovered under it, as if it were confined within a bladder; and when this membrane is broken, and the fluid discharged, there will be a red spot remaining, which will in process of time become an ulcer, but it appears to be very slow in its action. The external orifice of the urethra will be sometimes the seat of a chancre, and which is also very slow in its action. But chancres which are found on the corona glandis are generally chancrous spreadings of venereal ulcers, which began behind the glans, and therefore their origin belongs not to the corona glandis, but to the sebaceous parts behind the glans.”—Pp. 147—150.

The consequences of these ulcers spreading must, of course, depend upon their seat, and the nature of the parts they involve in their course, as the prepuce, the glans, the corpora

cavernosa, or the corpus spongiosum and urethra. In their progress, too, as well as on their first appearance, chancres differ materially, according to the parts which become diseased.

" In the progression of chancres situated behind the glans, the appearance of them will be like an honey-comb: and if the same chancre spread, so as to extend to the corona glandis, which is contiguous to it, the appearances on the one and on the other will be widely different; for that part of the chancre situated on the corona glandis will not be so eaten down as the other, and will be aphthous at its base, the edges of it will bleed, and they will not thicken like the edges on the sebaceous parts. When the white aphthous appearance at the base becomes clean, the cavity, which is made by the destruction of the chancre, does not fill up, but the loss will be always apparent. In the progress of ulceration, the frænum will be often eaten away: but that which is destroyed of the prepuce will be again supplied, unless it be of very great extent, and then the prepuce will become so contracted, as to continue to be a stricture on the glans. An ulcer on this part is seldom or never aphthous, but of an honey-comb nature, and eating deep into the surface; and so will an ulcer also on the external skin of the penis."* — P. 152.

The very general, some say the constant, attendant upon a venereal ulcer is a degree of thickening of the parts surrounding it. And though the remaining of some degree of hardness in the seat of the chancre cannot always be prevented, it is in some measure an unsatisfactory circumstance. On the contrary, the entire removal of all hardness or thickening affords a fair presumption that the local infection is radically destroyed.

* If our readers will take the trouble to compare the descriptions contained in this part of Mr. Foote's work, with that given by Mr. Evans of an affection under the name of venerola vulgaris, which he says is the most common form of ulceration of the genital organs, they will not fail to find a striking resemblance. Mr. E. too found that ven. vulg. was produced equally by gonorrhœal matter and by the matter of sores, that it was sometimes followed by constitutional symptoms, ushered in by slight fever, which in most respects resemble those of syphilis in a mild form.

Venerola indurata aut ulcus induratum, another of his species, he confesses to have " a common origin," and to be " occasionally followed by the same constitutional affections" as those of venerola vulgaris. What is this but a distinction without a difference? — a classifying, as distinct diseases, appearances which are but the varieties of one and the same disease. This is the effect of the mercurial criterion! We do not blame Mr. Evans: on the contrary, we thank him for the industry and perseverance he has shown in collecting observations, which, being faithfully made, will be valuable, when his speculations are forgotten.

M. Lagneau considers the word chancre as synonymous with venereal ulcer and syphilitic ulcer. Primary and secondary sores are by him equally included by the term, and this circumstance leads to some confusion in treating the subject. Thus, in describing the seat of the affection, he enumerates all the parts upon which primary ulcers commonly appear, and all those in which the ulcerations attending constitutional affection are ever seated. He describes the appearances of each more distinctly than could be expected, with such an arrangement; but in enumerating their common properties, he includes the power to produce bubo, saying, "presque tous ces ulcères peuvent donner naissance aux bubons;" as if it were quite as common an occurrence to see inflammation of a lymphatic gland from a secondary as from a primary ulcer. We ask our readers if these things be so? Then comes a difficulty which the manner of treating the subject alone raises, how to distinguish primitive from consecutive chancres, and this accompanied by an acknowledgment that the one class, the primitive, sometimes cicatrize under simple applications, whilst the other class will not commonly yield but to the regular use of antivenereal remedies. The descriptions, however, of ulcers, as they appear in the different parts, are admirably clear and correct. He notices fully the varieties of primary sores which have their seat upon the penis, and the modification to which the nature of each part of that complex structure gives rise. It is clear that he is of opinion "*that one description will not answer for the appearance of chancre on every part.*"

In considering warts of these parts, it should never be forgotten, and with regard to excoriations it should equally be remembered, that "if they be not originally venereal, they will be sure to become so, whenever a chance of contracting the disease readily offers." But, as Mr. Foote thinks, "owing to a plenteous discharge in the case of warts, other venereal symptoms, when warts are venereal, do not readily appear." "As long as a discharge continues unchecked by repellents, and as long as no mercury has been at the same time administered, I do not think other symptoms will appear; for whenever absorption does take place, either from this original cause or from chancre, the discharge from either will no longer be yielded with freedom." This remark appears to be one purely suggested by experience, and in some measure confirms us in an opinion which we entertain, that the internal use of mercury carried to a certain point, short of that at which it acts most beneficially, does for a period promote a condition of system favourable to absorption,

and actually aggravates rather than appeases the venereal symptoms. We do not say that mercury, as mercury, aggravates the disease, so much as that, at the period when mercury begins to exhibit its effects upon the system, the patient is often thrown into a condition unfavourable to the salutary operation of the mercury; there is a general disturbance in which the parts affected share, absorption readily takes place — ulcers enlarging or becoming drier, and buboes then first arising, and this without the external use of stimulating applications. Why, but for this, is there reason to say that the effects of absorption will not be produced, amongst other provisions, “as long as no mercury has at the same time been administered?” Is not this occurrence the source of many of the cases which are reported to be made worse by the use of mercury? We know of some published instances which make us think this to be the case, and we are sure that the unfavourable condition of the system, in which it is often attempted to introduce mercury, is the source of a great many more. But to return to Mr. Foote. We now have to place before our readers some of the principal opinions which he maintains respecting the local and general action of the venereal virus.

The chief proposition, and that upon which he founds most of his peculiar opinions, is —

“That venereal fluid, produced through infection, imparted by another subject, will be harmless to the subject who secretes it. That venereal fluid, thus produced, neither generally nor particularly, will ever act to the prejudice of that subject whose secretion it is; when it appears, and when it is known, that venereal fluid of one subject, by being imparted to another subject, and by there remaining, so that such fluid may take effect, is the only means through which the venereal disease can be propagated and can be supported.”

This proposition, as far as primary local affections are concerned, has been considered. The matter of chancres does not produce other chancres in the same subject. It is more difficult to show that the matter secreted in the original sore is no the cause of the secondary affections. Yet in the case of small-pox or cow-pox we do not ascribe the constitutional affections to the absorption of the patient's self-secreted matter, but to the action of the foreign virus; and we in no instance perceive any proportion observed between the extent of the primary and local, and the secondary and general symptoms.

It is well known that the animal matter of one subject, which has in that subject appeared perfectly healthy, and, therefore, could not but be harmless to that subject, for instance, a sound tooth has, when transferred to an absorbing

surface in another person, been productive of the most severe ulcerations, and consequent train of symptoms, which have been differently termed syphilitic and pseudo-syphilitic; and whether the one appellation or the other better denote the real nature of these cases, the law of animal poisons, as here laid down in regard to syphilis, but every where, we believe, applicable to morbid poisons, is equally well supported.

Mr. Foote maintains, "that all the fluids, all the secretions" of a person constitutionally infected by syphilis, "are capable of imparting the disease to a sound subject, provided the full opportunity be given" for the action of their infecting power.

"When the venereal poison has taken full possession of the constitution, not only the parts which indicate the disease to be venerea, by their apparent morbid vitiations, but also every part of the constitution is venereally tainted," and that by the "foreign virus alone, which, by being absorbed," brings on this "vitiation of the whole constitution."

In these opinions Mr. Foote is completely at variance with Mr. Hunter; but he shows that the experiments of Mr. Hunter, by which he thought he had proved that the matter of secondary sores is innocuous, whilst that of primary ulcers will produce chancres, not only in a person untainted, but also in one already constitutionally infected with syphilis, were fallacious, by explaining that Mr. H., in taking his matter from secondary sores, did it from the very subject on whom he made the experiments, and to whom it, according to the above law, must prove harmless; but in his trial of matter from a primary sore, took it from the chancre of another individual, and produced chancres upon the person who was already constitutionally infected. This we find to be a correct account of the manner and the result of Mr. Hunter's experiments; and, moreover, we perceive that, by inserting "the matter from a bubo of another person, where mercury had not been used," Mr. H. produced an ulcer on a woman, already constitutionally infected with lues, and which ulcer did not heal by the same applications as another slight sore which was produced by insertion of matter from his own secondary ulcers, and was cured by poultices, but afterwards heal readily during the employment of mercury. In repeated attempts he obtained chancres, but it was from the matter of *another subject*. In this only, that we perceive, was any ulceration produced by the insertion of the individual's own matter, and in this the characters of the ulcers from the two insertions widely differed.

"So much," says Mr. Foote, "does the venereal vitiation pervade

the whole of the constitution which possesses it, that even the blood of one infected, being engrafted upon a wound of another, which other was previously a sound subject, will most completely impart the disease, and will impart it with more rapidity than if it were introduced by the usual mode of infection, namely, through the absorbents."

And then he gives the celebrated instance, which was also published by Sir William Watson and by Mr. Hunter,* of the effect of transplanting a tooth. Mr. Pott witnessed the progress of the case, and "never hesitated to declare, that if ever there had been a venereal case more strongly marked by true venereal symptoms than any other, this was that case."

An instance follows of a gentleman who was infected from handling an opened body after death, he having "bitten off the cuticle which hung loose on his right fore-finger, and which generated into a chancre." The chancre did not heal, and within three months eruptions broke out over his body, which, with the chancre on his finger, gave way to mercury.

But these cases would by some persons be called pseudo-syphilitic, because cases originating in a similar way have not required mercury, or, at most, not mercury in more than alterative doses, for the removal of the symptoms. Who, however, at the present day, will venture to assert, that any venereal symptom, regular or irregular, with or without the characteristics described by Mr. Hunter, carefully treated from the first, but without mercury, will not yield to other remedies than mercury? Who is there, in short, who, if he calmly and perseveringly examines the evidence which has been accumulated, will not be staggered in his belief, if such he ever had, that there are many diseases, originating commonly in the same way, possessing so many characters in common that no one has yet succeeded to the satisfaction of more than a few partial friends in furnishing what he fancied invariably distinguishing characteristics, as to their primary appearances; and so resembling each other in consequences as to affect precisely the same parts, if not invariably in the same order, yet producing, in each and in all, very nearly resembling effects; and that these diseases are essentially and positively different? We confess ourselves, brought up as we have been in the very schools of pseudo-syphilis, prepossessed as we have been with the highest possible opinion of Mr. Hunter's and Mr. Abernethy's discernment and judgment, utterly unable to think on these subjects entirely with

* Hunter on the Venereal, p. 293, et seq. 4th edition. London, 1788.

the former, or at all with the latter. We know very well, that the influence of such characters as these is powerful indeed, compared with our own, and that we ought, with caution and deference, to express opinions directly opposed to theirs; and, in this instance, all that we are anxious to effect is to induce those, who have not inquired fully into the subject, to examine the writings of other men, and, among the rest, of Mr. Foote, not the least ingenious, though, perhaps, the somewhat slighted opponent of Mr. Hunter. We especially wish those young men who, in their practice, feel an anxious and discouraging hesitation in determining to which of the many classes of some writers particular appearances belong, to peruse the work of Mr. Foote, and to temper any thing erroneous that it may contain, by referring to Dr. Hennen's essay above quoted.

We purposely speak of English works, because there are many readers who cannot, and some who will not peruse foreign authors on these subjects. Most continental writers who are acquainted with our pseudo-syphilitic doctrines consider that the English have embarked on a sea of conjecture, without rudder or compass to assist in the direction of their course. But to return to our task.

On the subject of bubo, Mr. F. has an excellent chapter, and in it assigns many reasons for generally concluding cases of bubo which occur without gonorrhœa or chancre, without other evident cause, and after suspicious connexion, to be venereal. We cannot, however, follow him, and must pass over almost in total silence this and a chapter on "ulcers of the tonsils and eruptions of the skin." He thinks that after chancre or bubo, "venereal symptoms, from an infected constitution, will follow in regular succession, both in point of order and of time."

"In general, there will be a symptomatic fever, succeeded by ulcers on the tonsils, with or without eruptions on the skin, in six weeks or two months after the date of either. But when mercury has been imperfectly administered for the cure of local symptoms, the regular succession of constitutional symptoms will be interrupted; or when the virus of another subject has been absorbed into the constitution, without leaving any local impression, and in consequence of which the patient does not suspect that he is infected from that connexion, then ulcers on the tonsils, or eruptions on the skin, will appear within two or three months afterwards. This last possible form of infection being little known, and as little attended to, it has been a general practice to recur back to that period when the patient had a chancre, gonorrhœa, or bubo, and to attribute the cause of the constitutional symptoms to one of them, if it were ever so remote. But whenever I see a patient on the immediate appearance of ulcers on the tonsils,

and eruptions on the skin, and who never had any local symptom, I am of opinion, that the disease was contracted by him within three months."—P. 227.

We intended to extract a long description, called a "definition of primary symptoms of lues venerea from an infected constitution," but cannot allow the space. It enumerates the forerunners of eruption—depression of spirits and indescribable languor, erratic pains in every part of the body, aching and darting pain in the cylindrical bones, distinct from the boring pains which precede and accompany nodes—restlessness and fever. All these symptoms are relieved by the appearance of the eruption. Then arise "plain spots, not protuberant, especially upon the breasts and upon both shoulders, red, purple, yellow, or livid—sometimes distinct, small, circular—sometimes broad and spreading wide"—often appearing in the hair with a scab—on the forehead and on the cheeks—at times deep ulcerations—in the hands and feet forming clefts. When the throat is affected, "the uvula, tonsils, and whole arch of the fauces suffer pain, heat, and inflammation, are eroded by ulcers," and the bones of the palate become quickly carious—or tubercles and pustules in the palate become round phagedenic ulcers, which erode the bony roof of the palate. The nasal membrane gets thickened, fungous, ulcerous, or callous. The ulcers become malignant, or the bones get involved, and the nose falls. The speech is changed, and the voice becomes hoarse. The gums are eroded, the teeth fall out, the breath is foetid and hot, and raking.

Now this is a very formidable catalogue of severe affections, and though these be not the appearances of each individual case, could not be furnished but by a considerable number of unfortunate examples; and when we are told, in the circular of instructions sent, in 1819, by proper authority, and upon sufficient evidence, to our army medical officers, that "the reappearance of the primary ulcer, and repeated attacks of eruption, are the diseases which have been most frequently observed to succeed the non-mercurial practice," in syphilis, alike adopted in all, or very nearly all, the primary symptoms which presented themselves, in the prosecution of a most interesting inquiry; and perceive that Mr. Foote admits, that in almost every case of secondary affection, presented in private practice, which has been otherwise neglected, from the prevailing belief of its efficacy some mercury has been used, we cannot help inquiring, how is it there should be such a difference? Let it be remembered, then, that the cases of the soldiers have been under careful management; that confinement in bed, purgatives, blood-letting, low

diet, and warm baths generally, as each seemed best adapted to the constitution, and mild applications locally, have been most commonly employed.

We are apt to suspect that exposure with the infection in the system is of itself capable of aggravating the symptoms as they appear, and are convinced that when mercury is employed with exposure of this kind, or in an inflammatory condition of the system, frequently the symptoms will become severe, irregular, or intractable.

In proceeding to describe "other venereal constitutional symptoms at a more advanced stage of lues venerea," Mr. Foote first quotes a description of Vigo, who is known to have most extensively employed mercurial inunction; himself boasting "*se ceratum mercuriale suâ descriptione ordinatum millies expertum fuisse cum honore et utilitate non parvâ.*"* He quotes also Fracastorius; and from both these writers it appears, that the bones were affected by the disease in their time, but were the last parts to become diseased. The erratic pains which affect them prior to the occurrence of eruptions, subside upon their appearance. The eruptions, ulcers on the tonsils, and other symptoms, still proceeding; "some time after, the pains will become more fixed, tormenting, and constant; particularly at night-time, the rest will be broken, and the disease will then begin to show itself by nodes on the periosteum, by gummata on the aponeurosis of muscles, and after these a caries of the cylindrical bones and of the head will follow."

The constitutional symptoms, it is observable, are exhibited in soft parts first, and successively appear in affections of the harder. Mr. Foote is, therefore, strongly inclined to believe, that the disease in these parts (the harder) commences with other earlier appearances; "for," says he, "I have seen them (the pains, we believe) come on from a malignant and spreading ulcer, in six weeks after the chancre healed, and they never shifted, but continued to increase for nearly twenty months, until the patient was cured by mercury in extraordinary quantities, and by many repetitions;" and Mr. F. afterwards shows, that the eruptions and other affections may be removed by a course of medicine, inadequate to the removal of affections of the bones, contending that the mercury, as does the disease, requires longer to effect a change in parts of firm structure than in those that are less firm.

Lest this opinion should induce any one to persevere uselessly in the employment of mercury, the case of Ulrich

* Astruc: *De Morbis Venereis*, Lib: II. cap. vii. p: 120. 4to. Paris, 1736.

Hutten,* as given by himself, should be borne in mind. **H**utten, having had the disease ten years, and having tried mercurial frictions eleven different times without permanent relief to his bone-ach, recovered his ease by taking guaiacum.

“ When the pain,” says Mr. Foote, “ comes on upon the periosteum of a cylindrical bone, it will be found to extend the whole length of it, and to be only confined by each epiphysis of the bone. There will be exquisite tenderness experienced on touching the part, the periosteum will be thickened, and the skin which covers it will be œdematous, retaining the impression of the finger. The periosteum will at length inflame the skin, it will ulcerate and sometimes slough away, exposing thereby a caries of the bone to view. But when this is not the case, and it is not commonly so, owing to the disease not being permitted to proceed, the node will be found to be hard and circumscribed, extending itself up and down the surface of the bone, and sometimes there will be distinct nodes on the same bone.” — P. 246.

The former part of this quotation is a description of periostitis in its acute form, the latter part one of node of ordinary and gradual formation. The distinction requires the attention of Practitioners.

We cannot follow our author where he traces the disease as affecting most of the remaining parts of the human structure, as the glands, the eyelids, the tunica conjunctiva, and the cornea. Nay, we have so much exceeded the intended extent of our analysis, that we must pass by iritis, as well as the description of the disease when affecting the ear, and Mr. Foote's admonitions never to forget the possibility of the disease recurring, after its first symptoms have disappeared.

We had purposed examining, at some length, the subject of syphilis as affecting infants, and especially to have fully analysed the paper of that excellent Surgeon, the late Mr. Hey, and the remarks upon it by Mr. Pearson in his *Life* of that gentleman. We must now study brevity. Mr. Hey gives several instances of mothers who have infected several children successively, without having themselves received any fresh infection in the time. He mentions a woman who was infected with a disease, which we should consider syphilis, by drawing the breasts of another woman, and who communicated the disease so caught to Mrs. B., by drawing her breasts. Mrs. B. had swelling of the axillary glands and sore throat. She was treated for syphilis, and, becoming pregnant, miscarried of a dead child. She became again pregnant, and had an apparently healthy child, which in six weeks was affected with an eruption which was judged to be

* See Astruc, p. 444.

syphilitic. Mercury was productive of a cure. He relates too, the case of a lady who had some syphilitic symptoms of which the husband appears to have suspected himself the cause, though he denied having had any symptom of the disease since his marriage. The fœtus of which she was the pregnant, when born, had an universal desquamation of the cuticle, and, subsequently, hoarseness and copper-coloured blotches. It got well by mercury. Mr. Pearson says, that a woman, "afflicted with lues venerea, may contaminate the fœtus in utero," and the child be born dead, or exhibit the symptoms of the disease in about six weeks from its birth but adds: "It may be doubted whether an infant was ever born *alive* with the indubitable characters of lues venere upon its body." Again; he says that the cure of the woman by mercury during utero-gestation will not protect the fœtus from the agency of the poison. Mr. P. further states having seen cases of primary symptoms in newly married women (we presume of good reputation), whose husbands had no apparent disorder, local or constitutional, at the period of marriage nor subsequently, but *not* where neither party had previously suffered from venereal contamination. We are glad to be able to add an inference very logically deduced from some reasoning of Mr. Pearson, that "the conclusion drawn from the operation of mercury ceases to be a certain test of the presence or absence of syphilis."*

The support which the observations and remarks of these two experienced Surgeons afford to many of the opinions of Mr. Foote will not be inapparent to our readers, and we may therefore spare ourselves the pains and the space required for its elucidation. As Mr. F. believes in the power of the mother to infect the fœtus in utero, and in the capacity of persons, who have been constitutionally affected, to communicate a disease of which they have no remaining evidence in their systems but this power, he could not wish to have his doctrines more remarkably confirmed.

For the removal of the symptoms of this intricate disease, mercury, Mr. Foote believes, is essentially necessary. He also thinks that no determinate quantity of mercury will with certainty effect a cure, but that in its employment due attention must be given to its effects, both upon the constitution of the patient, and upon the symptoms of the disease. He advises a *continued* effect to be produced, under confinement, with regulated diet. He admits there are constitutions which require great caution during its introduction. He prefers mercurial frictions to its internal exhibition. We must refer

* Pearson's Life of Hey, Appendix II. p. 65.

for his directions, which bespeak great experience and judgment. The sudden introduction of a large quantity of mercury has frequently brought disgrace upon the remedy, and disappointment to its prescriber. Its effect, supposing it to produce no worse, is to occasion sudden salivation, which continues long after the specific and beneficial effects of the mercury have ceased, and serves to deceive the patient and the Surgeon. But often, too, it produces great constitutional disturbance, especially when it does not happen to cause purging; we do not mean mercurial tenesmus, but a full purging, by which, at first, its effects are lessened.

Whenever the constitution is unduly excited by the action of mercury, the local symptoms, of whatever character, as far as we have observed, whether they be primary ulcers, or affections of the fauces or nose, or palate or periosteum, are, for a time at least, aggravated, or their cure retarded.

If mercury is to be employed, we think more of preparation than is usual may very properly be practised. A much smaller quantity will answer the purpose when the system is in a favourable condition for its action. Very often when ready to condemn mercury as useless, nay, hurtful in particular cases, the use and repetition of a brisk purgative, or of blood-letting, has produced a state favourable to its action, and it has been resumed with quite different and beneficial effect. We lay it down, for ourselves at least, as a rule, that in all cases in which inflammatory symptoms come on (iritis excepted, and that because the organ is precious and soon perishes), as in recent attack of swelled prepuce inducing phimosis, in periostitis, in extending inflammation of chancres or buboes, mercury should be suspended. Antiphlogistic measures are to be adopted, sometimes with anodynes locally or generally, rest, if the case be severe, or as circumstances will, in milder instances, admit of it, and perseverance in this course till the inflammation is evidently *declining*. Then mercury may be advantageously resumed, and, if cautiously used, will accelerate the decline.

The milder applications to primary sores are, so much the better chance have we of avoiding buboes and secondary affections; and we think this of more importance than a few days gained in the healing of a trifling ulcer, at the expense of the slightest hazard of the kind.

These plans we pursue in common cases when mercury is our remedy; and though far less in haste than formerly to resort to its employment, we confess that we do not often entirely disuse it in cases which we consider syphilitic. It will be perceived, too, that we consider this a comprehensive term. But we are ready enough to acknowledge, that we

have now before us * evidence which, in our minds, amounts to positive proof that mercury is not absolutely necessary for the cure of symptoms of syphilis, whether they be local or constitutional. We mean here, syphilis which has proceeded from first to last uninfluenced by mercury, but under which the patient has been otherwise carefully managed, so that the disease has neither been aggravated by uncleanness, irregularities, or exposure to atmospheric vicissitudes, nor complicated by the partial employment of mercury under unfavourable circumstances.

II.

1. *A Treatise on the Epidemic Puerperal Fever, as it prevailed in Edinburgh in 1821-22; to which is added, an Appendix containing the Essay of the late Dr. GORDON on the Puerperal Fever of Aberdeen in 1789-90-91-92.* By WILLIAM CAMPBELL, M.D., Fellow of the Royal College of Surgeons, one of the Medical Officers of the Royal Public Dispensary, Member of the Medico-Chirurgical Society, and Lecturer on Midwifery, &c. 8vo. Edinburgh, 1822. Pp. 303 and 68.
2. *A Treatise on the Disease termed Puerperal Fever, illustrated by numerous Cases and Dissections.* By JOHN MACKINTOSH, M.D. 8vo. Edinburgh, 1822. Pp. 323.

THERE is, perhaps, no disease which has undergone so much discussion, and respecting the nature and treatment of which there has been such a diversity of opinions, as puerperal fever. Whilst the majority of Practitioners have, of late years, considered it as an affection of a highly inflammatory character, and requiring copious depletion; others, and some of them amongst the first ornaments of the obstetric art, have confidently maintained, that the means which have been found of service for the removal of other inflammatory affections, "will only in this disease seal the death-warrant of the patient, and that it would be easier to specify the remedies which have failed of being useful, than those which have been found in the least successful:" to the first class of controvertists belong, amongst others, Gordon, Armstrong, Hey, and the writers before us; whilst, under the banners of the

* Medico-Chirurgical Transactions, Vol. VIII. part 2; containing the papers of Messrs. Rose and Guthrie.

Hennen's Principles of Military Surgery, 2d edition.

Hill on the Simple Treatment of Syphilis. Edinburgh Medical and Surgical Journal, October, 1822. Cum multis aliis.

second, are enrolled the names of Professors Hamilton, Burns, and others.

It must impress every observing mind with sentiments of regret and astonishment, that in a disease where so many opportunities occur of rendering ourselves familiar with its symptoms, and where, unfortunately, so many cases present themselves for improving ourselves in the knowledge of its pathological anatomy, so great a discrepancy should take place in the pathological and therapeutical views which have been formed regarding it: one great cause of this discordance is, that the term *puerperal fever* has been applied by some to every inflammatory attack of the peritoneum or uterus occurring in childbed women, whilst, by others, it has been considered that the inflammatory appearances supervene to an idiopathic form of fever, and, even when inflammation is actually present, that it is combined with some debilitating poison, *sui generis*. Under the one or the other of these divisions may be arranged the great majority of the Practitioners of the present day.

As the publications before us are ushered into the world principally for the purpose of acting as antidotes to the opinions entertained by Hamilton, Burns, and others, we shall enter into some observations for the purpose of inquiring whether or no the puerperal fever of the authors before us can be considered as the identical disease, described by the celebrated writers above mentioned, under that name.

With this intention, we shall pass over the history, &c. of the disease, and proceed to what Dr. Campbell has very properly esteemed a most important part of the subject—the *diagnosis*.

“When a Practitioner,” says Dr. Campbell, “meets with a puerperal patient labouring under *acute fixed pain in the lower part of the abdomen, aggravated on pressure, or a general soreness of the abdomen, rendered more acute by pressure, accompanied with frequent pulse, hurried inspiration, and much uneasiness on turning to either side in bed*, he may rest assured that such patient is affected with puerperal fever; and unless she is considered in this light, the conduct of the Practitioner should undoubtedly be brought under the cognizance of legal investigation for professional ignorance, since the *symptoms which I have now enumerated must always be present in some degree*.” —P. 237.

From this *denunciatory* paragraph, marked in italics, as we have given it, in the original, conjoined with the following quotation, it will be observed that, according to Dr. Campbell, any phlegmasia affecting the peritoneum or uterus, or even intestines, may be considered as puerperal fever.

“The symptoms teach us,” he remarks, “and the appearances on dissection confirm, that distinctions into low childbed fever, peri-

tonitis, hysteritis, and enteritis, are of no practical utility, because the peritoneum, intestines, and the uterus, are so intimately connected, and in so favourable a state for inflammation, that whichever be the one first affected, the excitement cannot long be confined to any of them, but must, on the contrary, spread with rapidity over the whole. Whoever, therefore, will take up much time with nosological arrangements, will too often lose an opportunity of doing good, which he never afterwards can retrieve." — Ibid.

Dr. Mackintosh's sentiments regarding the nature of the disease which he denominates puerperal fever, pretty nearly correspond with those of Dr. Campbell: in addition, however, he classes under the same head the ephemera or weed; but, as if totally forgetting what he had observed in a former part of the same paragraph, he makes a distinction between that slight affection, as its name imports, and puerperal fever.

"As I am on the subject of the diagnosis," says Dr. M., "it may be observed, that this variety of the disease can never be mistaken, after it is formed, for the ephemera or weed, as it is commonly called, which I hope to be able to show is a species of the puerperal fever. Ephemera is, in general, a slight, and, as the name imports, a very temporary affection, but should not, on that account, be neglected. Great and fatal congestions are known to take place from slight causes; and it is hard to say, when a puerperal woman shivers, whether this slight disease, or puerperal fever, is to follow." — Mackintosh, p. 38.

Professors Hamilton and Burns, on the contrary, carefully discriminate the different diseases which have been grouped by the writers before us under the denomination of puerperal fever, considering the inflammation in the disease to which they apply that term as of a specific nature, and inculcating the necessity of avoiding general bleeding, whilst they recommend it as our sheet anchor in peritonitis, hysteritis, and enteritis, occurring in the puerperal state. "Puerperal fever," says Professor Hamilton, in some manuscript notes which we have before us, "may be distinguished from hysteritis by the lochia in the latter being suppressed (which is *never* the case in puerperal fever), and by the uterus being to be felt hard and enlarged through the abdominal parietes, which are not much distended, and being exquisitely painful when pressed: from iliac passion it may be distinguished by the pain in that disease being situated round the umbilicus, and by the bowels being costive: in puerperal fever, also, very mild laxatives are sufficient to open the body, whereas, in iliac passion, the bowels are very difficultly soluble." And again: "The principal diseases which have been mistaken for it, are peritonitis arising from suppression of the lochia and hysteritis. I lay it down as an established principle, that, when there is

Suddenly pain of the abdomen and suppression of the lochia, it will either end in hysteritis or peritonitis. When the abdomen is tense and painful, and the uterus cannot be felt, it is peritonitis; but when the parietes are relaxed, and the uterus can be felt enlarged and hard, the disease is hysteritis."

The pathognomonic symptoms of puerperal fever the Professor considers to be, "despondency of the countenance; pain of the abdomen increased upon pressure; pain over the eyebrows; uneasiness of breathing; lochia not suppressed; fæces abominably fetid, liquid, of a dark brown colour, and working like yeast, immediately after they are discharged."

Mr. Burns also carefully distinguishes his puerperal fever from simple peritonitis and hysteritis. "It is important," he observes, "to distinguish this disease from simple peritonitis, which may generally be done by attention. In puerperal fever, the abdominal pain is not the most prominent symptom. There is more despondency, debility, and headach; less heat of the skin, less thirst, and less flushing of the face. In the peritoneal inflammation, the pain in the belly usually increases rapidly after it begins, and the swelling increases along with it. Pressure gives very great pain. The fever is inflammatory. Inflammation of the uterus has its proper symptoms."

A striking difference must therefore be allowed to exist between the disease described by Professors Hamilton and Burns, and that to which the same term has been affixed by Drs. Campbell and Mackintosh: the former gentlemen, as we have before observed, considering it an inflammation *sui generis*, whilst the latter apply the term puerperal fever to any abdominal inflammation supervening in childbed women: added to which, Professor Hamilton states it to be highly contagious, whilst the authors before us describe their puerperal fever as by no means of an infectious character. For ourselves, we have no hesitation in declaring it as our firm belief, not formed hastily, but after the full investigation of the works before us, and of other works of reputation, comparing them, at the same time, with our experience, that the disease, which Drs. Campbell and Mackintosh have described, is not that to which we should apply the term *puerperal fever*. Respecting the specific nature of the disease, we are disposed to agree most completely with Professor Hamilton, although we can by no means subscribe to some of the *pathognomonic* symptoms on which he placed so much stress; we mean, most especially, the invariable presence of the particular appearance of the stools, and the lochia being *never* suppressed: each of these symptoms we consider to be

susceptible of great variety : at least, we certainly should not go so far as the Professor in asserting, that where other characteristic symptoms are present, and these (according to him) pathognomonic absent, the disease is not puerperal fever.

Our sentiments regarding the nature of the disease may be given in a few words : whenever a patient, in the puerperal state, is attacked with general derangement of the functions with symptoms of peritoneal inflammation, which speedily run into a complete typhoid state, we should be disposed to pronounce the case one of puerperal fever ; under such circumstances, we are strongly disposed to believe, the disease will generally be found of a contagious character. In addition to the cases which have been adduced by Gordon, Hamilton, and others, regarding its power of being communicated by infection, we could adduce several which have occurred not only in our own practice, but in that of others, where the disease was apparently communicated from one puerperal patient to another through the medium of a third person, and where the whole of the instances were confined to the practice of the same individual, the patients of other Practitioners living in the immediate vicinity being perfectly free from the disease.

Although we may differ, however, from the authors before us, in making a distinction between peritonitis, hysteritis, and puerperal fever, our practice would be equally effective with theirs : not only should we trust to venæsection in the two former affections as our sheet-anchor, but we should place no less dependence upon it in many cases of the latter, when employed, to a less extent, at the very commencement of the disorder, and before complete typhoid symptoms have manifested themselves : after this time, we are satisfied it is attended with manifest injury. Nothing in the world can prove more distinctly the difference between puerperal peritonitis, hysteritis enteritis, and puerperal fever, than the circumstance that, in the two former, we may frequently employ venæsection twenty-four, or forty-eight hours, and even longer after the first attack, with the greatest success ; whilst when at all admissible in the latter, if the first opportunity be lost, a similar treatment will only accelerate the fatal event.

The following observations of Mr. Burns, respecting *peritonitis*, will show that his practice is not less vigorous than that followed by the writers before us in the similar cases which fell under their care ; at the same time, it is important for us to observe, that the treatment which he has laid down for that affection, is very nearly what we should strongly inculcate the necessity of adopting in a great proportion of

Cases of both what he and we ourselves consider to be puerperal fever.

"The patient," says Mr. Burns, "is only to be saved by vigorous means and great attention. If the pulse continue above a hundred in the minute, for twenty-four hours after delivery, there is reason to apprehend that some serious mischief is about to happen; and, therefore, unless the frequency depend decidedly on debility, produced by great hæmorrhage, &c., we ought to open the bowels freely, and give a diaphoretic. We must carefully examine the belly, and if it be full, or painful on pressure, or if the patient be inclined to vomit, we ought to open a vein, and use purgatives. I know that many are unwilling to bleed women in the puerperal state, and the condition of the pulse may seem to young Practitioners to forbid it. But in cases of peritoneal inflammation, not connected with typhoid fever, I must strongly urge the necessity of blood-letting, at a very early period; and the evacuation is to be repeated or not, according to its effects, and the constitution of the patient. If she have borne it ill, and is not relieved when it is used first, I apprehend that the case has not been simple peritoneal inflammation, but puerperal fever. If she bear it well, and the pulse become slower and fuller, and the pain abate, we are encouraged to repeat it. I wish to impress on the mind of the student, in the most earnest manner, the fatal consequence of neglecting blood-letting in this disease. How many women fall a sacrifice to the timidity or inattention of their attendant! The lancet is the anchor of hope: it may, indeed, be pushed too far; it may be used by young Practitioners in cases of spasm, mistaken for peritonitis; but the error is safer than the contrary extreme, for of two evils debility is more easily removed than inflammation. After the lancet has been freely used, if pain continue, leeches, or the scarificator, may be applied to the most painful part. The bowels are at the very first to be opened freely with calomel, or some other purgative, which we require to give in a large dose, particularly calomel, for ordinary doses do no good. Dr. Armstrong gives half a dram of calomel, and afterwards a purgative draught of senna and salts to work it off, and I think the practice safe. In an advanced stage of the disease, after effusion has taken place, we must employ purges alone, rather than blood-letting. Sinapisms and blisters are also proper. Digitalis has been given, either to abate inflammation or promote absorption after effusion has taken place; but I have not found it useful. After effusion has taken place, and debility is produced, cordials, of which wine is the best, should be given, and anodyne clysters are to be administered."

With regard to Dr. Campbell's work, we can say, with great sincerity, that we consider it an excellent description of abdominal inflammation occurring in the puerperal state: it will, however, be impossible for us to follow him through the diffuse but interesting observations, which he has laid down, regarding the history, symptoms, pathology, etiology,

and mode of treatment of the disease which he has denominated puerperal fever, more especially as the reader will form a correct idea of the manner in which the disease was opposed, by the first *successful* case adduced by Dr. Campbell, which we shall transcribe, passing over case first, the termination of which was unfortunate, in order that Dr. C. may not have occasion to suspect us of having selected an unsuccessful case from any sinister motives.

Case 2d.—"The subject of this case was a Mrs. Macdonald, a stout healthy woman, of thirty-seven years of age, living in the garret of No. 1, Blackfriars' Wynd. She was attended by Dr. Patrick Murphy both during her labour and subsequent indisposition. This gentleman was one of my assistants about this period, and I shall detail the case verbatim, as offered to me by himself, for I consider it to have been drawn out with great accuracy.

"I called the following day, April 4th, at two, P. M., twenty-four hours after delivery, the patient having been visited in the meantime by another gentleman attending Dr. C.'s lectures. On inquiring into the nature of her complaint, I was informed, that a short time after my departure on the preceding day, she had begun to be affected with after-pains, which increasing in frequency and severity during the night, had, without any marked rigours, become gradually converted into a fixed pain, extending over the abdomen, but particularly severe in the hypogastric region, and attended by exacerbations occurring every few minutes; during which, the contortions of her countenance, and the deep groans that accompanied them, expressed the most excruciating agony. On passing my hand over the abdomen, she complained of the severe uneasiness this pressure occasioned, which became altogether intolerable when exerted over the region of the uterus. The patient complained also of pain of the head and of the epigastric region, which latter, as well as that in the lower part of the abdomen, were greatly aggravated on attempting to take a full inspiration. The uterus felt somewhat enlarged, but there was no tension, and only slight general tumefaction of the abdomen. The lochia, which were scanty from the first, became diminished in quantity, though not suppressed. She had made water, but her bowels had not been evacuated since delivery. The secretion of milk was checked, and the mammæ appeared small and flaccid. There was no vomiting; tongue parched and thickly covered with a dark brown fur; patient had no appetite, and complained of incessant thirst. Her skin was dry and hot; her pulse strong and firm, at the rate of 150 strokes in a minute. From the above symptoms, it appeared to me obvious that she laboured under the same dangerous disease that had proved fatal to the female whose dissection I had witnessed the preceding day. From reflection, also, upon the ravages that had been committed by violent inflammation in the former case, *I felt convinced that there was only one line of practice which held out any prospect of saving the life of the patient, and that this consisted in the early and*

decisive use of the lancet. I accordingly proceeded to open a vein in the arm, from which I obtained twenty-six ounces of blood, when she became faintish. The good effects of the bleeding were obvious and immediate. Although the pulse was reduced but ten beats in a minute,—remaining 140 after the operation, it was rendered weaker and softer. She could now take a full inspiration without pain, could bear pressure on the abdomen much better, expressed herself free from headach, and in every respect greatly relieved. Having given directions for warm fomentations to be applied to the abdomen, and *℞* sulph. magnes. to be taken immediately, I took my leave, and returned at four, P. M., accompanied by Dr. Campbell and Dr. Moore. We found all the symptoms nearly as when we left the patient, with the exception of the pulse, which had again risen to 150, and was acquiring strength. The pain of the abdomen, though greatly relieved by the bleeding, was still severe. We now judged it proper to take away more blood, which was done by tying up the same arm, and allowing the wound, previously made, to bleed twenty ounces, when she became faint, and the ligature was removed. Her pulse remained at 150 after the bleeding, but was much reduced in strength. She was then prescribed the following powder, with a view to excite the action of the skin and intestines. *℞* Submur. hyd. gr. iij., oxid. antim. cum phos. calc. gr. vj. M.; the warm fomentations were to be continued, and the powder repeated if necessary. April 5th. She had two dejections some time after taking the first powder, and the skin became covered with perspiration, which continued more or less all night. The second powder was also taken, and excited vomiting. Towards morning she enjoyed several hours' sleep, after which she felt refreshed, and was entirely free from pain, unless when a considerable degree of pressure was made upon the abdomen. . . . She had no other remedy from this time than an occasional diaphoretic and purgative, and in a few days she was so far recovered as to be able to undertake the fatigues of nursing and her other domestic concerns."

"This is one of the few cases where the disease was ushered in without any distinct rigors, which, by some, is thought to happen frequently when it occurs in private practice, but my experience is diametrically opposite to this opinion; and it was the only instance where there was pain in the epigastric region upon pressure at the commencement of indisposition. It is also worthy of remark, that Dr. Murphy had attended the lectures of Professor Hamilton only the year before, and had every respect for him as a teacher, yet he was so convinced of the inconsistency of his opinions respecting the disease under consideration, that he bled this patient without consulting any one, although we might suppose that his faith in the use of the lancet would have been somewhat staggered in consequence of Mrs. Nielson's fate (case 1st), in whose case it had been rather freely, though not early enough employed. He confessed, however, that the appearances, on dissection, in the last case, had induced him to have recourse to bleeding."—P. 67.

Now, although considerable doubt may exist in the minds

of some individuals whether or no the foregoing was a case of genuine puerperal fever, we are satisfied no one can object to the mode of treatment which was adopted by Dr. Campbell and his assistants: it was judicious; it was effective; and such, we are satisfied, as both Professors Hamilton and Burns would have strenuously followed, had the case occurred in the practice of either of these experienced Practitioners.

Dr. Mackintosh's work is an extremely rambling dissertation on the same disorder as that described by Dr. Campbell. We regret, however, to observe, on so important a subject, such marks of extreme haste displayed in almost every part of it. In the department of the work appropriated to treatment, we are satisfied that more harm is likely to arise from one assertion of Dr. M.'s, considering, as he does, that puerperal peritonitis and puerperal fever are synonymous, than by the promulgation of the views which Professors Hamilton and Burns entertain regarding the latter disorder. We allude to the following observation:—

"I have now to lay an outline of my plan of treatment before the reader. It must be impressed upon his mind, that nothing will be of use, unless bleeding is practised within the first six hours, repeated every two or three, in such quantity as the nature of the disease requires, and the strength of the constitution will admit."

Luckily, however, for our inexperienced readers, the Doctor gives us, in the same page, a caution which answers, in some degree, the purpose of an alexipharmick for the poison which he has administered:—

"The only fatal case I remember," he observes, "in which bleeding was employed within the first six hours, is that of Mrs. Cunningham, recorded at page 214. Dr. Campbell bled her a very short time after the rigor; and although the most active practice was afterwards pursued, the appearances, on dissection, displayed the high degree of inflammation; whereas, in the case of Mrs. Finlay, bleeding was not employed till eighteen hours after the rigor and pain had subsided; *that, at whatever period we are called, unless there are decided marks of mortification or effusion, we should bleed if the strength will permit, but the longer the disease has existed, the greater, of course, should our caution in employing this remedy.*"—P. 265.

The following dogmatism made use of by Dr. Mackintosh is likewise perfectly absurd: "Unless a patient," he remarks, "in puerperal fever is visited every two hours at the commencement, no treatment will do any good." To say nothing of the folly of making the success of the treatment depend on the number of visits paid, our readers will readily see, that no one extensively engaged either in public or private practice

tice, or where his patients reside at considerable distances from each other, can possibly conform to Dr. Mackintosh's *sine qua non*; and, moreover, we should think, that if such important changes were occurring as to render these repeated visits imperatively necessary, Dr. M. ought to have given us a report of the state in which he found his patients every two hours at the commencement of the disorder; this we find, in looking over his cases, he has very rarely done.

On the whole, in the treatment of the disease which they have described, we are willing and anxious to give both Drs. Campbell and Mackintosh every credit. The means made use of were energetic and judicious. We cannot, however, accord with them in the belief that the whole of the cases they have described were the puerperal fever of Burns or Hamilton, or the disease to which we should apply the same term; although we are willing to grant, that in the very commencement of the disorder it is not often of very material consequence in practice, as, in the majority of cases, depletion is imperatively required, but to an extent differing very considerably according as the disorder is strictly local from its commencement, or is actually a general disease of the system, in which the local symptoms supervene in its course, owing to the disposition of the pelvic viscera to become affected under the particular condition in which they are left after child-birth. In the latter case (and in many respects in the former), the treatment must vary very much, so as to become often different, or even opposite, according to the type and character which the malady may assume, owing to the nature of the primary and controlling causes, and to the circumstances of the patient.

We cannot conclude our remarks on the works before us without expressing our regret that both Drs. Campbell and Mackintosh should have considered it necessary to pervert so greatly the observations of Professor Hamilton, and to have obliquely directed attacks at him, which are unworthy of scientific and philanthropic individuals co-operating for the relief of human suffering. Professor H. is well able to defend himself against such attacks, and we are satisfied he will show himself not less able than willing; we may merely observe, that in holding up the mortality which the Professor has experienced in what he calls puerperal fever, they ought to have done him the justice to have stated, that he only adduces the mortality in what he considers the most malignant and specific variety of peritoneal inflammation; whilst their statements include all the cases, not only of what the Professor calls puerperal fever, but of puerperal peritonitis and hysteritis, and even (as we have before observed), accord-

ing to Dr. Campbell, of enteritis, which have occurred in their practice during the periods they have specified; diseases which the Professor treats as actively as judiciously, and, we believe, as successfully as either of the writers before us; at the same time, had he bled early in many of the cases of his puerperal fever, we are strongly inclined to think his practice might have been much more successful. We do not like to see any unnecessary sophistry or acerbity manifested in the discussion of such important subjects.

Dr. Mackintosh's work is terminated by an appendix containing a smart review of a case of puerperal fever, by J. Moir, Surgeon, Edinburgh, which appeared in the Edinburgh Medical and Surgical Journal for October, 1822. This gentleman has advocated the principles and practice of Professor Hamilton, and, like him, meets with a very cavalier sort of treatment from the Doctor. Our contracted limits will only permit us to refer the reader to that part of Dr. Mackintosh's publication.

Since the above observations were written, we have received a "Reply to a Pamphlet, entitled, Notes on Dr. Mackintosh's Treatise on Puerperal Fever, by Mr. Moir, Surgeon; and to Letters in the Appendix by Dr. James Hamilton, Jun., &c. &c., by John Mackintosh, M.D." As we have not seen Mr. Moir's "Notes," however, it would be improper for us to give any sort of opinion regarding the question at issue, as we fully agree with Seneca that

"Qui statuit aliquid, parte inaudita altera,
Æquum licet statuerit, haud æquus est."

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

Researches on the Pathological Anatomy of the Digestive Canal, considered in its Sub-diaphragmatic Portion. By M. ANDRAL, Jun. M.D.

(Continued from page 252.)

Not only does the mucous coat, when in a state of inflammation, become thickened and softened, but *vegetations* sometimes arise from

its internal surface, of a red or brown colour, concave form, and of extreme softness, pressed one against the other, and projecting four or five lines above the rest of the membrane. They somewhat resemble the papillæ of the under surface of the tongue, supposing those divided in small fragments in the direction of their length; and, like them, they are loose and moveable. A great number of similar vegetations were found in the stomach of a man, who died two months after having taken powdered cantharides (Orfila). We have observed them in the large intestine only.

In place of these vegetations, the mucous membrane sometimes presents white conical *pustules*, projecting from half a line to a line, being about as large at the base as a lentil, the majority depressed at the summit, and exactly resembling variolous pustules. They are rarely found isolated, being most commonly grouped, like the eruption of confluent small-pox. Between them the mucous membrane is sometimes red, sometimes scarcely injected. We have never met with these pustules in the stomach. Once we have observed the internal surface of the duodenum covered with them in its upper portion; we have seen them three times in the transverse colon; but it is in the two lower fifths of the small intestine that they most commonly show themselves.

We have more frequently witnessed in the colon pustules of a different aspect. They are conical like those just mentioned, and are situated in the mucous coat, which, when removed, takes them along with it. Their base is, however, much broader, their height more considerable; they terminate in a pointed head; they are of a deep cherry red, and the mucous coat around them is but little injected. We cannot give a more exact idea than by comparing them to those small tumours of the skin, known under the name of furuncles or boils.

M. Lermnier has proposed to designate these different species of eruptions under the generic name of *exanthema internum* (*exanthème interne*). This is one of the lesions which the intestines present in fevers, as we shall elsewhere show.

The mucous coat, when inflamed, is modified in its functions, like other tissues, when attacked with inflammation. The examination of the changes which the constant absorption undergoes, that takes place at its surface, does not belong to the province of pathological anatomy; we shall not, therefore, enter into it here, but proceed to point out the modifications experienced by the liquids secreted by it, both as regards their quality and their quantity.

The changes in the quality of the *gastric and intestinal mucus* cannot always be easily appreciated, in consequence of its either being mixed with the drink and chyme, or with the biliary and pancreatic fluids.

It presents two important modifications: sometimes, instead of being viscid, ropy, tolerably consistent, it becomes much more liquid, and resembles serum; at other times, on the contrary, it becomes more plastic, concretes, and is transformed into a *false membrane*.

All authors have spoken of false membranes lining the internal surface of the colon in dysentery, and being evacuated *per anum*. May they not, in some cases, become organized, adhere together like the false membranes of the serous coats, and occasion the obliteration of a part of the intestine? We read, in truth, in authors, of examples of inflamed intestines which were by that means partially obliterated. We have never had an opportunity of witnessing the organization of this species of false membranes. We have never observed these membranes except in the stomach and great intestine.

We have found the whole of the internal surface of the pyloric portion of the stomach lined by a greyish, tenacious layer, which might be torn into flaps, and simply lying on the mucous coat, of which it was, at least, the thickness. In a young girl, twelve years of age, the internal surface of whose stomach presented a great number of red patches, extending in the form of broad stripes from the cardia to the pylorus, we found each of these patches covered by a membraniform, greyish, albuminous layer: between them the internal surface of the stomach, which was very white, was not covered with any false membrane.

It is not uncommon to find the portions of an inflamed intestine filled with a *reddish liquid*, which appears to be owing to a mixture of mucus and blood. The cæcum and the end of the small intestine are the parts where it is most commonly met with. We have sometimes observed bundles of ascarides situated in this bloody liquor, which existed in no place except surrounding them.

On injecting corrosive sublimate into the subcutaneous cellular tissue of an animal, Dr. Smith found the mucous coat of the stomach covered with an abundant *sanguineous exhalation*.

The *quantity of liquid* exhaled by the mucous coat, in a state of inflammation, is sometimes prodigious. Morgagni has cited the example of a woman, who, in one day only, passed, *per anum*, forty pounds of a limpid fluid. The debility into which such a considerable discharge throws the animal economy, may be sufficiently considerable to occasion death in a very short space of time.

It is not only the secretion of the mucous coat which in this case is modified and augmented. Dissection demonstrates that the inflamed intestine solicits a more abundant *secretion of bile*, which flows towards the parts labouring under inflammation. Stoll has noticed this fact: but far from regarding the afflux of bile as being owing to a pre-existent inflammation of the intestine, he regarded the latter as an effect of the presence of the hepatic fluid.

The *sub-mucous cellular tissue*, in the greatest number of cases, remains untouched beneath the mucous coat, when the latter is violently inflamed and even disorganized. Occasionally, however, it is found pretty strongly injected; sometimes, also, like the cellular tissue which surrounds the arteries, it acquires an extreme fragility. We may then very easily detach the mucous coat without tearing it, to the extent of several inches: in some cases sanguineous effusion takes place between its interstices (*dans ses mailles*), some examples of

its internal surface, of a red or brown colour, concave form, and of extreme softness, pressed one against the other, and projecting four or five lines above the rest of the membrane. They somewhat resemble the papillæ of the under surface of the tongue, supposing those divided in small fragments in the direction of their length; and, like them, they are loose and moveable. A great number of similar vegetations were found in the stomach of a man, who died two months after having taken powdered cantharides (Orfila). We have observed them in the large intestine only.

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much more active, as experiments, made on living animals, demonstrate.

Considered with relation to their seat, intestinal intus-susception are far from being equally frequent in the different portions of the digestive tube. The ileum is the most common situation in which they occur. Fabricius Hildanus and Bartholin have seen the cæcum received into the ileum; Hartmann, on the contrary, found the ileum received into the cæcum. Invaginations of the colon are very rare. Meckel says he has seen the transverse and descending colon introduced into its sigmoid flexure. Bonetus has related a case of invagination of the rectum in a man who died of obstinate obstruction of the bowels, accompanied with vomiting of a fæcal matter. Can we believe the assertion of a German writer, who says he has seen the duodenum invaginated in the ductus choledochus?

With regard to their disposition, the superior portion of the intestine is most commonly received into the inferior. Sometimes they are very numerous: we have observed as many as seven in the same subject. Their length may vary from some inches to upwards of two feet.

The symptoms occasioned by invagination of the intestines vary according to their size, situation, number, and degree of obliteration of the intestine.

The *subperitoneal cellular tissue* is still more rarely affected than the sub-mucous: like the latter, it may become very fragile; like it also, it may acquire considerable thickness. In the latter case, the peritoneal covering is found to be separated from the muscular coat by a cellular layer, two or three lines in thickness, whilst, in the ordinary state, we rather suppose it, as it cannot really be seen.

The *peritoneal coat* almost always remains untouched: occasionally, however, like the two laminated membranes (*comme les deux membranes lamineuses*) it is very fragile. We have found, in some cases, all the coats of the intestine equally softened at the same time and to a very high degree. The slightest traction was sufficient at such times to tear its parietes; and when gently rubbed between the fingers, they became reduced into pulp.

This general softening has seemed to us to be more common in the stomach than in any other portion of the intestine.

The mucous coat of the digestive canal, disorganized by inflammation, is apt to become destroyed to a greater or less extent, and whether it is, that the particles composing its tissue are absorbed, or that they are carried away along with the contents of the intestine, *ulcerations* are the consequence, which always originate in the mucous membrane, primitively or secondarily inflamed.

Ulcerations may occur in all parts of the intestine from the cardia to the anus; but they are by no means of equal frequency in every portion. Thus they are sufficiently rare in the stomach, and still more uncommon in the duodenum and jejunum. They are very common in the lower third of the small intestine, and less so in the different portions of the great intestine. We may judge of their

respective frequency by the following table, which was formed from the results of fifty-three dissections, several of which had ulcerations, at the same time, in many parts of the digestive tube:—

Seat of the Ulcerations.				Number of Subjects.
Stomach	-	-	-	9
Duodenum	-	-	-	1
Jejunum	-	-	-	9
Ileum (lower portion)	-	-	-	26
Cæcum	-	-	-	10
Colon	Ascending	-	-	4
	Transverse	-	-	11
	Descending	-	-	3
Rectum	-	-	-	1

These ulcerations are commonly numerous, except in the stomach, where we generally observe only one or two. In the superior portion of the small intestine, they are constantly separated by great intervals. In its inferior portion, we always find them much nearer to each other: they are frequently united and confounded near the ileo-cæcal valve, so as to form, by their union, one large ulcer. In the cæcum, it is very unusual to find them so confluent, as well as in the remainder of the large intestine, where the spaces which separate them are commonly more considerable than the spaces, even, which they occupy.

They frequently arise in the middle of the red circumscribed patches of which we have already spoken, and at such times the mucous coat which surrounds them remains white, as around the patches. It is important to remark this disposition, because the perfect whiteness which exists around many ulcerations, had occasioned it to be admitted that they might occur in the mucous membrane without previous inflammation; but it is clear that they are, in this case, the result of partial inflammation.

Ulcerations also follow the pimples and pustules with which the mucous membrane is sometimes covered. If, in fact, we observe attentively these different exanthemata, a slight erosion may be perceived at the tops of many: the summit of some others will be found to have undergone a more considerable loss of substance: the small ulcer which results extends progressively from the top of the pustule to its base, finishing by entirely destroying it. Does not the greatest analogy exist between the mode of the production of these ulcerations, and the development of certain ulcers of the mouth, which likewise owe their origin to small pustules known under the name of aphthæ?

Sometimes, also, the ulcerations are, as we shall hereafter establish, the result of the separation of eschars on the mucous membrane.

Is it in the mucous follicles that ulcerations most commonly commence? Several authors have thought so. The greater vital activity in the follicles than in the other parts of the mucous coat, the more considerable vessels which they receive, the frequently extraordinary

secretion of which they become the seat in many intestinal phlegmasiæ, may lead us to suppose, that whenever the mucous coat is inflamed, they are most especially irritated, become disorganized, destroyed, and ulcerated: but no fact shows that this is *actually* the case. The greater frequency of ulcerations in the lower portion of the small intestine is, in truth, in a direct ratio with the greater number of follicles in this same part; but in the duodenum, the follicles are likewise extremely numerous; they are larger, more apparent than any where else, and, notwithstanding this, the duodenum is the part of the *digestive* tube where ulcerations most rarely show themselves.

Nothing fixed can be established regarding the period at which the mucous membrane, when inflamed, becomes ulcerated: it frequently happens that no evidence of *solution of continuity* is to be met with, although it has been the seat of very old and tolerably intense inflammation. The facility and rapidity of its ulceration appear connected with some individual, inexplicable, disposition. This is demonstrated by experiments made on living animals of the same age and strength, which have been poisoned by an equal dose of corrosive sublimate. At the end of forty-eight hours, we find, in some, only a lively red colour of the mucous coat of the stomach, whilst, in others, the internal surface of the stomach already presents one or more ulcerations. We read in Morgagni the case of an individual who, whilst in perfect health, was suddenly seized with most excruciating pain at the epigastrium, and with every other symptom of gastritis. He died at the end of twenty-four hours: ulcerations existed in his stomach.

The size of intestinal ulcerations is infinitely varied: some are so small they will scarcely admit the head of an ordinary pin; others are several inches in diameter in every direction: we have sometimes seen them occupy the whole circumference of a portion of the intestine. We have found the mucous coat entirely removed for more than six fingers' breadth above the cæcum: it is in this part of the intestine and in the stomach that we have met with the largest ulcerations. Some are oblong, and have their largest diameter in the direction of the length, or of the breadth of the intestine; others are exactly circular, and others again are linear.

Their edges are always formed by the mucous membrane. Sometimes they are red, thick, and elevated two or three lines above the base of the ulcer, whilst, at others, they are white, thin, and on a level with the bottom. Occasionally they are irregularly formed, and present numerous fringes, which advance from the circumference towards the centre of the ulcer.

We have often met with the mucous membrane separated to a pretty considerable extent around the ulcers: when they are in great number, and in proximity with each other, the mucous coat which separates them is sometimes entirely, or almost entirely detached from the subjacent tissue. This separation, owing to the morbid alteration of the cellular tissue, is similar to that which is observed around many cutaneous ulcers.

The base of the ulcerations differs according to the time at which we examine it. If the solution of continuity be recent, the laminated tissue which forms its base is thin and white as in its natural state:— it may preserve this appearance for a longer or shorter time: but when the ulceration has already existed for some time, it commonly acquires a considerable thickness, which may be easily felt on touching the external surface of the intestine—it becomes rugous, unequal, granulated—it is of a grey, red, or brown colour—it secretes a liquid which shows only these different tints, which sometimes concretes into a false membrane, and forms, at its surface, a layer more or less dense—in some circumstances it assumes a totally black colour, and seems to be transformed into a true eschar. But most commonly the laminated tissue becomes insensibly destroyed, after the manner of parts affected with that species of inflammation which Hüller designated under the name of ulcerative inflammation, and the base of the ulceration is then formed by the muscular membrane. This latter coat sometimes preserves its natural appearance; at others, it becomes progressively very red, soft, black, and destroyed in its turn, leaving the peritoneal membrane exposed. The base of the vast ulcerations at the end of the small intestine, or in the cæcum, frequently show these different coats exposed in different parts of its extent. In some cases, we may in a manner follow with the eye the successive destruction of the coats from the internal towards the external surface of the intestine, and from the centre of the ulceration towards its circumference. At such times, the edges of the ulcers are observed to present, as it were, different stages. The first, the most remote from the centre, is formed by the thin or thickened mucous coat, of a red or white colour; the second, situated more internally, is formed by the laminated tissue; the third, still nearer the centre, is formed of the muscular coat; and, finally, at the base, the thin and transparent peritoneal coat is observable. This last membrane grows altered in its turn: it becomes more fragile, tears, and perforation of the intestine is the result.

Such is the progressive march pursued by these ulcerations, when they extend in depth, but most commonly they seem to have a tendency to extend in width only, at the expense of the mucous membrane alone. Thus, in the majority of cases, we have found the base occupied by the laminated tissue.

As the ulcerations may form very rapidly, so may they extend in depth with a rapidity sometimes terrific. This is attested by various cases of poisoning, in which the intestines have been found perforated in a very short time.

Under some circumstances, the perforation is effectuated from the exterior to the interior. This occasionally occurs in cases where tubercles are formed in the peritoneal coat: becoming soft, this accidental tissue destroys the serous coat, and an ulcer results, the base of which is formed by the muscular tunic. Sooner or later this becomes destroyed likewise, and the parietes of the intestines are formed, under such circumstances, at these parts of the thin and transparent mucous membrane alone: finally, this last gives-way

in its turn. We have recently witnessed these different stages in a young man affected with tubercular peritonitis (*péritonite tuberculeuse*.)

Intestinal perforations may likewise supervene without previous ulceration, in cases where all the coats which constitute the parietes of the intestine are softened at the same time. The least force exercised upon these parietes by solid, liquid, or gaseous bodies, is, under such circumstances, sufficient to occasion their rupture. Can an intestine, the parietes of which are neither ulcerated nor softened, be so much distended with flatus or liquids as to burst? The stomach of herbivorous animals presents this phenomenon. Frank cites facts which appear to demonstrate that a similar rupture may be produced in man by the accumulation of flatus in a circumscribed portion of the intestines. It is thus that, according to Stoll, the bladder may burst when it is distended by a too great quantity of urine.

May not intestinal worms, in some cases, destroy and pierce the parietes of the canal which they inhabit? or, in cases where many of these animals have been found in the peritoneum, have they passed through a perforation which had been already made? Some observations of Wepfer tend to cause us to admit the possibility of the perforation of the intestine by worms. In the thirteenth chapter of his treatise on the *Cicuta Aquatica*, he observes that, on dissecting dogs, he found lumbrici in their intestines, many of which were still living, and adhering strongly to the parietes of the intestine by 'one of their extremities, in the manner of a leech: "Proboscis firmissimè internæ intestinorum tunicæ infigebatur, à quâ etiam, sublato intestino, hirudinum instar, pendebant. Hi monstrarunt rationem et modam quo intestina, umbilicum, et inguina perforent."

Whatever may have been the mechanical or vital cause under the influence of which the intestine has been perforated, its cavity communicates either with the exterior—with some viscus—or with the cavity of the peritoneum. Hence arises the very great difference between the symptoms, which follow the perforation and which announce it.

1. *Communication between the digestive tube and the exterior.*—Examples of this are numerous: it is the artificial anus. Adhesions are established between the edge of the perforated intestine and the abdominal parietes, and no effusion can take place into the peritoneum. We can thus explain how a ball may traverse the abdominal parietes, and be voided by stool, without having been attended with fatal effects, (*Ephem. Nat. Cur.*): how a knife swallowed was discharged, at the end of seven weeks, through an abscess formed at the epigastrium, without the patient succumbing. The following case we observed at *La Charité*:—A man, thirty-four years of age, had been affected with diarrhœa for several months; a hectic fever insensibly consumed him; he complained of a violent pain in the right iliac region; this part soon grew tumefied, and fluctuation became manifest. A lancet was passed into the centre of the tumour; this gave issue to some fetid gas, with a few drops of a greyish liquid equally fetid. The following days a larger quantity was

discharged; the patient soon fell into the last stage of marasmus. We found beneath the skin of the iliac fossa a vast abscess, containing a greyish liquid of a gangrenous fetor, and circumscribed on every side by thick cellular bands (*brides*). Scarcely any traces of the muscular fibres of the parietes of the abdomen were recognisable; they were blackish, soft, and, as it were, diffuent. At the bottom of the abscess was the cæcum, the external paries of which presented a perforation with irregular edges, sufficiently large to admit the extremity of the little finger. Numerous ulcerations existed in the intestine.

2. *Communication between the digestive tube and another organ.*—In this case, as in the preceding, adhesions, established by the beneficence of Nature, prevent any effusion into the peritoneum. Sometimes the intestine opens into a hollow part, into which it empties itself: thus, Frank has seen a communication established between the arch of the colon and the bladder. Sometimes the dense and solid tissue of a viscus supplies the destroyed parietes of the stomach or intestines. Thus we have often seen the bottom of carcinomatous ulcers of the stomach formed by the liver or the pancreas. Frank relates cases in which the paries of the intestine was supplied by the spleen and by the kidney.

Authors worthy of credit even assure us that they have seen communications formed between the stomach and thoracic cavity. Willis, quoted by Bonetus, found in a subject the diaphragm destroyed, and the stomach opening, by a large aperture at its superior edge, into a pleuritic pouch of the right side. Van Swieten relates a nearly similar example.

3. *Communication between the digestive tube and the peritoneal cavity.*—In this case, the matters discharged from the perforated intestine are effused into the serous membrane. The peritonitis which is the consequence is attended with great variety, as regards its march, its duration, and its symptoms.

Most commonly it has a very acute progress; the patients sometimes dying a few hours after the first symptoms have manifested themselves. Some patients are warned by a very particular sensation at the precise moment at which the effusion takes place. A man, whose cancerous stomach gave way during violent efforts of vomiting, informed us that he had distinctly felt as if a ball had descended from the epigastrium towards the umbilicus, immediately before the pains of peritonitis declared themselves. Stoll relates the case of a patient who, when labouring under retention of urine, felt something suddenly give way in his abdomen, and became at the same time stiff and livid: it was the bladder which had given way. The patients experience excruciating pain; they are in a state of extreme anxiety; the features of the face become rapidly discomposed; the pulse is irregular, thready, &c.

This *ensemble* of frightful symptoms is seen to manifest itself suddenly in individuals who, some minutes before, appeared to enjoy perfect health: their digestive tube has been perforated.

These facts prove with what astonishing rapidity ulcerative

inflammation may be propagated : through it the slightest enteritis or gastritis may suddenly become mortal. The following case presents a striking example of it :—

A brushmaker, aged seventeen years and a half, of a lymphatico-sanguine temperament, had always experienced very good health. On the 13th of October, 1822, at seven o'clock in the evening, he felt, without any known cause, stupor and general indisposition. During the whole of the night his skin was of a burning heat. The next day, 14th, same state: anorexia, only one stool; abundant perspiration during the night. 15th, he was received into *Le Charité*. He perspired again in the nights of the 15th and 16th. At the visit of the 16th, he presented the following symptoms :— Face red; eyes sparkling; pains in the limbs; tongue covered with a thick yellowish coat; lips red: *factor oris*—anorexia; slight thirst; belly soft and without pain; no stool for twenty-four hours; pulse frequent, tolerably full; skin moist. (*Barley-water with gum, a lavement of marsh-mallows*). The patient had only one dejection until the next morning.

17th. Six grains of ipecacuanha were administered: the patient vomited twice a tolerably large quantity of bile; no motion; in the night slept well; awoke in a slight perspiration.

The next day, in the morning, (18th,) the yellowish coating of the tongue had disappeared, and it was of a fine vermillion colour; the bad taste in the mouth no longer existed; the pulse was a little frequent; the temperature of the skin nearly natural.

From the 19th to the 23d a slight febrile movement continued: anorexia; same state of tongue. One motion each day after the *lavement*. (*Emollient tisanes; broth*.)

23d. The tongue was much redder; the frequency of pulse had considerably augmented; the skin was burning; the abdomen painful on pressure. Two liquid motions in the last twenty-four hours. This return of the symptoms was combated by the application of eight leeches to the anus. (*Barley water diet*.)

During the day, the pains of the abdomen assumed a terrifying intensity, and in the night he began to vomit a great quantity of green, porraceous bile.

In the morning of the 24th we found him lying on his right side: the eye dim; the face pale and cadaverous; the slightest pressure upon the abdomen, the least movement, occasioned the most violent pain. Continual nausea tormented him, which was followed, from time to time, with the expulsion of some gulps of bile. Respiration quick and laborious; pulse very frequent, small; skin without heat. The existence of peritonitis did not admit of doubt. M. Lermnier presumed that the cause might be referred to an intestinal perforation. (*Forty leeches to the abdomen; oily fomentations; mild sinapisms to the legs in the evening. Linseed tea*.)

The vomiting continued to take place during the day.

25th. Eight o'clock, A.M., abdomen less sensible, but swollen and renitent; no fluctuation could be felt; the limbs were cold; the pulse thready; the eye, however, had still a tolerably natural ex-

pression: the intellect was clear; the speech free. (*Blisters to the thigh.*)

He died at 5 o'clock in the evening.

Sectio Cadaveris, performed fifteen hours after death.—Albuminous flakes, forming false membranes, united together the folds of the small intestine. A turbid, lactescent, very foetid, serous fluid was effused into the two flanks and into the hollow of the pelvis. The peritoneum underneath the albuminous flakes was strongly injected. The mucous membrane of the stomach was every where white and sound: an equal degree of whiteness was observable in the whole extent of the small intestine; but about a foot above the ileo-cæcal valve there existed five or six oval pimples, as white as the mucous coat surrounding them. The centre of one of these was ulcerated: the base of this ulceration, formed by the serous membrane, had in its centre a round perforation of a line and a half or two lines in diameter. Round these pimples the mucous membrane was covered with several small white, miliary pustules; developed in its interior, and scarcely projecting above its surface.

The great intestine was perfectly sound, as well as the other viscera.

A tubercular mass, of the size of a small nut, existed at the top of the right lung. The exacerbation of the 23d correctly marked the period at which the ulceration took place: the perforation was produced a few hours afterwards.

(To be continued.)

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

1. Some Experiments on the Effects on the Animal Economy of Substances in a state of Putrefaction. By M. MAGENDIE.

In a former Number of the REPOSITORY we gave some account of the interesting *Mémoire* of Dr. Gaspard "on Putrid and Purulent Diseases"—by experiment, he succeeded in producing in animals at will, and after some hours, several of the diseases occasioned in man, by putrid exhalations. The vomiting and black motions, for example, appeared evidently to be the effect of the alteration of the blood caused by the introduction of putrid matter into the circulating system. "I have repeated M. Gaspard's experiments with the greatest care," says M. Magendie, "and have prosecuted them with a view to their medical application: his results I affirm to be perfectly correct. Furthermore, I have observed, that different sorts of flesh in a state of putrefaction were not possessed of the same activity. The muscles of the herbivorous *mammifères* appear less active than those of

the carnivorous. Putrefied oyster-water was not followed with very violent effects: but the most deleterious matter is putrid fish-water: a few drops of this water injected into the veins produce, in less than an hour, symptoms which bear the greatest analogy with typhus and the yellow fever. Death commonly takes place in the twenty-four hours, and, on opening the body, we find every mark of a chemical alteration of the blood. A very considerable portion of this liquid remains fluid; it has transuded through the parietes of the vessels into the different tissues, particularly those of the mucous coat of the intestines; it has accumulated, along with the mucus, in the stomach and intestines; and presents, in these parts, the intermediate tints between the lively red and the deep black. This phenomenon merits all the attention of the physiologist; it leads us to examine the influence of the viscosity of the blood over the capillary circulation and the exhalations; it would seem to indicate that the healthy state of the blood, in which its tendency to coagulation is very strong, prevents the transudation of that liquid through the parietes of the small vessels. Another fact has struck me in pursuing these experiments: the same putrid water, so deleterious when injected into the veins, has no noxious effect, if introduced, even in a very strong dose, into the stomach or great intestine of animals. Nevertheless, I am satisfied that it is absorbed at the surface of the mucous coat of the intestines: it is not impossible, however, but that the mucus which covers the membrane and the pores of the small vessels may act as a filter, and arrest the animal particles, in a state of putrefaction, suffering only the water to pass which held them in suspension or even in dissolution. I intend to make fresh researches upon this new and interesting question. I have only as yet tried one experiment, as follows:—I took two separate ounces of putrid fish-water; this was turbid from the animal matters which it held in suspension: one of the two portions I filtered through paper, which rendered it nearly limpid. I injected both liquids into two dogs, which were nearly under similar circumstances, as regarded age, size, &c. The animal which received the filtered liquid was affected with much less severe and more prolonged symptoms than that into which the unfiltered water was injected. The latter died six hours after the injection; the other lived two days. Simple filtration through paper had therefore some influence; and it may be reasonably supposed, that if it had been more perfect, the putrid water would have entirely lost its noxious qualities. The pulmonary mucous membrane and the tissue of the lung were alike in each case. An equal quantity of the same putrid water injected into the veins, or introduced, with proper precautions, into the divisions of the bronchiæ, did not produce the same results. Injection into the lung produces less serious consequences than injection into the veins. This does not take place, however, in liquids not susceptible of decomposition, or, more correctly, which cannot be modified by filtration: the effects are nearly similar, whether they be introduced into a vein, or injected into the trachea. The study of the effects on animals of effluvia or miasmata which arise from matters in a state of putrefaction, is a species of research which may lead to very important results. Some trials of this nature I performed in the course of last summer. I arranged a cask in such a manner that its bottom should contain putrefied matter; and above these an animal was placed, on a grating with a double bottom, exposed to the miasmata which continually escaped from it. On this grating I at first placed pigeons, rabbits, and guinea-pigs. Their food was choice and abundant. None of these animals experienced the least accident, although they were retained there nearly a month, and I had kept up a very active focus of putrefaction at the bottom of the cask. I then placed on the grating a healthy dog: it was well fed, frequently visited, and caressed, in order that it might patiently support its captivity. For the first four days

endured its situation tolerably well; but afterwards began to grow emaciated; and although it preserved its cheerfulness and appetite, it died, as it were, of emaciation (*exténué*), at the end of ten days. It presented no symptom which could recal to us the effects of putrid substances injected into the veins; there was no black vomiting: in short, it died evidently from the influence of the miasmata which it respired and swallowed with its food. Dissection exhibited an almost total absence of fat, of aliments in the stomach, and of chyle in the lacteal vessels and thoracic duct. The intestinal mucous coat was inflamed, but much less so than in the case of putrid injection into the veins. I have several times performed this experiment, and the results have not sensibly differed, except as regarded the period of death, which did not take place in one instance until the twentieth day. I ought not to omit one remarkable exception. A dog, three years old, experienced no derangement in health, during a stay of six weeks in the cage; he became, as it were, seasoned (*acclimaté*). In order to be satisfied whether he was really unsusceptible of the effects of substances in a state of putrefaction, I injected into his veins a quantity of putrid liquid more than sufficient to occasion serious symptoms, and I was not a little satisfied to find him experience scarcely any effect from it.

"From the preceding facts, it seems that liquids in a state of putrefaction, when injected into the veins, cause the death of animals, or excite symptoms which bear the greatest analogy to those of yellow fever and typhus; that the long continued respiration of putrid miasmata likewise produces death, but in a much longer time, and with symptoms which do not remind us of the diseases I have mentioned. To what can a difference in the *modus operandi* of the same substances be owing? Why this diversity in the action of their deleterious property?

"It would be extremely important to be able to resolve these questions, as in them consists the whole of the difficulty, relative to the endemic diseases which have recently occupied the attention of the public. Amongst the conjectures which might be made to resolve them, there is one which merits particular attention. It may be presumed that different conditions of the atmosphere, particularly temperature and hygrometry, may have a great influence upon the *modus operandi* of putrid miasmata. Some experiments on this subject I have instituted, of which I shall give an account on a future occasion."—*Journal de Physiologie, par MAGENDIE, January, 1823.*

II. Case of Hydatids found in the Pulmonary Veins; read at the Académie Royal de Médecine. By M. ANDRAL, Jun. M.D.

On opening a subject, lately, at *La Charité*, I found both lungs filled with a great number of hydatids. I was at first of opinion that these *encystoires* were lodged in the parenchyma of the lungs; but a short time afterwards I examined the preparation, conjointly with M. Breschet, when a more attentive dissection discovered to us a fact, of which, I believe, there are but few analogous cases in the annals of science, viz. the existence of hydatids in the pulmonary veins. Several of these hydatids were lodged in sacs with a smooth surface, which appeared at first to be so many cysts. Others, empty and rolled several times upon each other, were contained in narrow canals, which ramified like vessels, and the lengthened form of which they had assumed. The internal surface of these canals was smooth like that of the great sacs. We soon discovered that in each sac a vessel of a small caliber terminated: this, in order to form it, underwent a more or less considerable dilatation. We then dissected the pulmonary veins at their origin; and when we had almost arrived at their capillary divisions, we began to witness several of them present a number of dilatations (*renflemens*), filled with hydatids. After being thus dilated, the vein resumed its primitive caliber, but a little farther on became again

dilated. The most considerable sacs would have admitted a large nut, and the smallest could have scarcely contained a pea. They existed equally in both lungs. The hydatids which they contained had all the characters of *acephalocystes*; in several there were small points of a faded white colour; others presented on their internal surface a great number of miliary granulations. The majority were broken. Around them the pulmonary tissue was in some places sound and crepitating; in others, strongly obstructed and *hepatized*.

A large hydatiferous cyst, with cartilaginous parietes, and capable of admitting a large orange into its interior, existed in the middle of the liver; it contained from eight to ten hydatids. The right cavities of the heart were considerably dilated, and the parietes of the right ventricle a little thickened. The individual who was the subject of this case was a man about fifty-five years of age, who for a year previously had been ill fed, and often experienced considerable distress. I mention these facts, because in accounting for the presence of these animals in man, it may be considered that the regimen and manner of living exercise some influence on their development. During the stay of the patient in the *Hôpital la Charité*, nothing but the ordinary symptoms of an affection of the heart were manifested. Pulsations distinguishable by the noise, but without impulsion, over the whole extent of the sternum and under both clavicles; pulse ordinary; face turgid and livid; anasarca of the limbs; constant state of orthopnea; a crepitating rattling, audible in several parts; in others complete absence of respiration. The difficulty in respiration became greater and greater, until the period of his death. It is not unreasonable to suppose that the presence of so great a number of hydatids in the pulmonary veins impeded the circulation, and contributed to the development of the aneurism of the heart. — *Ibid.*

III. *Medical Society of London.*

The anniversary of this Society was held on the 8th of March, when the following Officers and Council were chosen for the ensuing year:—

President, Dr. Shearman. — Vice-Presidents, Dr. Clutterbuck, Dr. J. G. Smith, Mr. Andree, Mr. Callaway. — Treasurer, Mr. Andree. — Librarian, Dr. Hancock. — Secretaries, Mr. Pettigrew, Mr. Callaway. — Secretary for Foreign Correspondence, Dr. Henry Blegborough. — Council, Drs. Welchman, Uwins, Blegborough, Copland, Blicke, Stewart, Harrison, Martin, Merriman, Hopkinson, and James Johnson; Messrs. Winder, Rees, Sutcliffe, Drysdale, Box, Johnson, Dunlap, Kingdon, Ward, Taylor, Brown, Clarke, Lake, Ashwell, Wray, Skair, Powell, Egerton, Lloyd, Forster, Handy, E. Leese, Ware, and Edwards. — To deliver the Oration in March, 1824, Dr. John Gordon Smith. — Registrar, Mr. James Field.

After the announcement of the election, the president stated, that one dissertation only on the subject "dropsy," proposed by the society for the Fothergillian medal, to have been adjudged in March, 1823, having been presented, the society thinking it probable that from the recent establishment of the prize it had not been sufficiently made known to the medical faculty, have deferred the adjudication of the prize for the best dissertation on the subject of "dropsy" to another year. He farther stated, that the silver medal offered by the society for the "best essay or essays, read before the society during the year, written by a fellow," had been adjudged to Dr. Clutterbuck, for several valuable papers presented to the society during the year.

The following resolutions respecting the Fothergillian medal were afterwards announced:—

1. The society resolve to give annually to the author of the best dissertation on a subject proposed by them, a gold medal, value twenty guineas,

called the "Fothergillian medal," for which the learned of all countries are invited as candidates.

2. Each dissertation offered for this prize must be delivered to the registrar, in the Latin or English language, on or before the 31st of December.

3. With it must be delivered a sealed packet, with some motto or device on the outside; and within, the author's name and designation: and the same motto or device must be put on the dissertation, that the society may know how to address the successful candidate.

4. No paper in the hand-writing of the author, or with his name affixed, can be received; and if the author of any paper shall discover himself to the committee of papers, or to any member thereof, such paper shall be excluded from all competition for the medal.

5. The prize essay will be read before the society, at the meeting preceding the anniversary meeting of the society, in March, 1824.

6. The prize medal will be presented to the successful candidate, or his substitute, at the anniversary meeting of the society.

7. All the dissertations, the successful one excepted, will, if desired, be returned with the sealed packets, unopened.

The subject of the essay for the gold prize of the ensuing year, is, "diseases of the spine."

The oration was delivered by Mr. Grainger, on concussion of the brain,

&c. The society afterwards dined at the London Coffee-house.

IV. Medical and Chirurgical Society of London.

The anniversary meeting of this Society took place on the 1st of March, when the following Members were elected Officers for the ensuing year:—President, John Abernethy, Esq., F.R.S.—Vice-Presidents, William Prout, M.D. F.R.S.; Peter M. Roget, M.D. F.R.S.; Thomas Chevalier, Esq. F.R.S.; Thomas Copeland, Esq.—Treasurers, William Somerville, M.D. F.R.S. Lond. and Edin.; William Lawrence, Esq. F.R.S.—Secretaries, John Alexander Gordon, M.D.; Henry Earle, Esq.—Librarian, Samuel Cooper, Esq.—Other Members of the Council, Charles Bell, Esq. F.R.S. Edin.; George Birkbeck, M.D.; John Cooke, M.D. F.R.S. F.A.S.; Sir Alexander Crichton, M.D. F.R.S. F.L.S.; David D. Davis, M.D.; John Elliotson, M.D.; John Gunning, Esq.; Halliday Lidderdale, M.D.; William Macmichael, M.D. F.R.S.; Benjamin Travers, Esq. F.R.S.; John P. Vincent, Esq.

V. [We have great pleasure in inserting the following letter from Dr. Cooke to Dr. Copland. At the time that the first volume of the work on Nervous Diseases appeared, we read it with much attention; but the observations in the preface had entirely escaped our recollection when the treatise on Epilepsy came before us; otherwise we would not have accused Dr. Cooke of failing in what he has not attempted:—]

Gower Street, March 8, 1823.

DEAR SIR,—In the last Number of the MEDICAL REPOSITORY you have done me the honour to speak favourably of my treatise on Epilepsy, with which, however, you do not seem quite satisfied, because it contains but little that is new.

In the last sentence of your critique you say, "if Dr. Cooke has failed to present us with much originality," &c. Now, a failure, you know, implies an attempt; but so far from having attempted originality in my work on Nervous Diseases, I have, in the preface to the first volume, expressly disclaimed it. Permit me to trouble you with the following quotation from this preface:—"It was the opinion of a late eminent Physician, that more real service may be rendered to medicine by the illustration of what is already known, than by any attempt to promulgate new theories or new modes of practice. Impressed with the justice of this opi-

nion, I have taken considerable pains in endeavouring to collect, to arrange, and to convey in plain clear language, a variety of useful observations from the best authors, both ancient and modern, respecting the principal diseases of the nervous system." In the next sentence but one, I distinctly denominate my work *a compilation*.

As a considerable time has elapsed since the treatise on Apoplexy, containing the above introductory observations, was published, I have no doubt that they have escaped your memory, and that you will be obliged to me for reminding you of them.

I am much flattered by your approbation of the manner in which I have "embodied the sentiments of others," and by your warm recommendation of my work to the attention of the Profession.

I am, dear Sir,

Yours, very truly,

Dr. COPLAND.

J. COOKE.

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BRITISH.

Thoughts on the present Character and Constitution of the Medical Profession. By T. C. Speer, M.D., M.R.I.A., late Physician to the Dublin Dispensary, &c. Cambridge, 1822. 8vo. Pp. 132.

This is one of the most extraordinary publications that we have ever had occasion to notice since the commencement of our critical labours. Dr. Speer appears determined to "run a muck and tilt at all he meets" in the shape of a practitioner in physic. As far as we can understand from the work before us, the author objects to the redundancy of Physicians: we hope Dr. S. has not found this out from personal experience, but we are afraid the majority of his readers will think so. As an example of the opinion which the Doctor entertains of the *tiers-état* in the Profession, the Apothecary, we quote the following singular passage:—

"We hear mothers talking as familiarly of calomel and bile as they used formerly of camomile and brimstone; indeed, calomel seems quite a toy in their hands, and a most charming toy it is. Family medicine-chests are now becoming a regular article of furniture, and their smiling contents are dabbled with on all occasions. Receipts in cookery and recipes in physic are changing places. Messrs. Buchan and Reece and Co., standing generally on the same shelf with the Bible, the Cookery-book, and the Almanack, are diligently consulted on all occasions as well for prevention as cure: if matters get worse, the family Apothecary is perhaps called in; his pills and draughts are always inviting; they seem like a cordial halm that offers instant relief; but, alas! they fail, matters get worse, serious disease makes its progress, much less perhaps from its original nature than from the drugs by which it has been combated. The case at length becomes one of life and death, the skill of the mother, nurse, and cook, the charms of Messrs. Buchan, Reece, and the medicine-chest, the consolations of the Apothecary, and the beauty of his pills, all go for nothing: as a last resource, the Physician is called in, and if he can undo all that has been done, he is both a lucky and a learned man."—P. 63.

We could multiply extracts *ad libitum* which breathe an equally *liberal* spirit, but we have said enough to give our readers an idea of the work before us: the only censure which we anticipate is, that we should have taken the trouble to notice it at all.

FOREIGN.

I. Nouveaux Principes de Chirurgie, rédigés suivant le Plan de l'Ouvrage de G. de la Fage; contenant, 1. Une Introduction à

l'Etude de la Zoonomie, l'Anatomie générale, l'Anatomie descriptive et la Physiologie; 2. *L'Hygiène*; 3. *La Pathologie générale*; 4. *La Pathologie externe ou chirurgicale*; 5. Enfin, *la Thérapeutique, la Matière Médicale, et les petites Opérations de la Chirurgie*. Par F. M. V. Legouas, D.M.P., etc. Quatrième édition, revue et augmentée, &c.

This work having already gone through three editions, is a sufficient proof of the estimation in which it is held. The present edition is enriched with several important additions, and will, in all probability, experience the same lot as the three former, which have been eagerly purchased, and favorably reviewed.

II. *Histoire de l'Epidémie de Suetie-Miliare qui a régné, en 1821, dans les Départemens de l'Oise et de Seine-et-Oise*. Par P. Rayer, Docteur en Médecine de la Faculté de Paris, Médecin titulaire du Quatrième Dispensaire, &c. 8vo. Paris, 1822. Pp. 480, avec deux planches lithographiées.

In consequence of the great prevalence of an epidemic fever, accompanied with profuse sweats and miliary eruption, having appeared in the department of Oise, M. Rayer was sent into the unhealthy district by the government, along with other scientific Physicians, to inquire into the nature of the disorder; and the book before us is a well-written and instructive account of his observations on that occasion.

III. *Exposition Méthodique du Règne Végétal, dans laquelle les Plantes sont classées d'après les Différences qu'elles présentent dans leur Organisation, et leurs Fonctions; précédée d'un Mémoire sur les Fruits, et d'un Tableau Systématique de tous les Etres Organisés*. Par J. F. Caffin, Médecin. Un vol. in 8vo. Paris.

This work is by no means despicably written; on the contrary, the matter which it contains will be found to be possessed of considerable interest to the botanist.

WORK RECEIVED FOR REVIEW.

Remarks on the Yellow Fever of the South and East Coasts of Spain; comprehending Observations made on the spot, by actual Survey of Localities, and rigorous Examination of Fact at original Sources of Information. By Thomas O'Halloran, M.D., Member of the Medical Academies of Madrid and Barcelona. 8vo. Callow and Wilson. London, 1823.

LITERARY INTELLIGENCE.

In the press, an Exposition of the Principles of Pathology, and of the Treatment of Diseases. By Daniel Pring, M.D., Member of the Royal College of Surgeons, London.

Shortly will be published, a Letter to the Right Rev. Dr. Milner, Catholic Archbishop, on the Controversy between Messrs. Lawrence, Abernethy, and Rennell, on the subject of the Human Soul and on Organization. By Viola.

Preparing for the press, and will be published early in the ensuing spring, a Translation, by J. S. Forsyth, of "*Précis Elémentaire de Physiologie*." Tome Second. Par F. Magendie.

NOTICE OF LECTURES.

Mr. Collier's third or Summer Course of Lectures on General and Pharmacological Chemistry and *Materia Medica* will commence on Tuesday the 24th of June, and be continued, as usual, every succeeding Tuesday, Thursday, and Saturday, until completed.

THE METEOROLOGICAL JOURNAL,
From the 19th FEBRUARY to the 20th MARCH, 182

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50, High Holborn.

February.	Moon.	Rain Gauge.	Therm.			Barom.		De Lac's Hygrom.		Winds.		Atmo. Var.	
			9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.
20			38 43	36 29	67 29	80	71 72	W	WSW	Fine			
21		.21	39 48	33 29	53 29	36	85 80	WSW	WSW	Rain			
22			36 42	36 29	50 29	42	90 75	W var.	WSW	Rain			
23			39 46	39 29	51 29	21	96 78	W var.	WSW	Rain		Stor.	
24		.77	43 50	38 29	53 29	61	68 79	NW v.	W var.	Fine			
25	☉		41 49	34 29	45 28	98	88 84	SE	W str.	Clo.	Rain		
26			37 45	32 28	80 28	92	68 79	SW	ws w v.	Fine			
27			36 48	34 29	05 29	13	77 72	NNW	NW	Fine			
28		.06	37 43	33 29	31 29	51	71 68	WNW	NNW	Fair	Fine		
1			35 49	34 29	74 29	88	77 84	NNW	NW v.	Fine			
2			36 50	44 29	86 29	66	75 80	SW	SW v.	Fine			
3			46 50	40 29	50 29	29	84 74	W	WSW	Clo.	Sho.		
4	☾		42 46	37 29	19 29	15	68 75	W var.	W hur.	Fine	Fine		
5			39 45	32 29	25 29	43	70 77	WNW v.	WNW	Fine	Sho.		
6		.10	34 39	31 29	60 29	64	77 67	NNW	NW	Fair	Fine		
7			33 33	32 29	30 28	84	73 90	SSE	SE	Clo.	Sho.		
8			34 40	32 28	92 29	00	84 80	WSW	NE v.	Fair	Fine		
9			36 40	31 29	10 29	44	79 70	N var.	NNW	Fair	Fine		
10		.20	33 39	36 29	58 29	37	77 80	W	SSE	Clo.	Fair		
11			39 48	35 29	54 29	69	74 75	WSW	W	Fine			
12	☾		38 50	37 29	91 30	02	79 70	WNW	NW	Fine	Fine		
13			40 50	45 30	07 30	04	70 75	W	SSW	Fine	Fair		
14			47 52	39 30	04 30	13	83 83	SW	NNE	Fog	Rain		
15			43 50	35 30	20 30	24	83 85	NNE	ENE	Sho.	Fair		
16			37 49	37 30	24 30	08	87 85	NNE	SW	Clo.	Fine		
17			39 48	40 29	95 29	87	87 81	NNW	WNW	Sho.	Clo.		
18			43 50	32 29	60 29	45	79 83	SW	NNW	Sho.	Clo.		
19	☽	.37	32 40	31 29	50 29	77	76 74	N	NNW	Sho.	Rain		

The quantity of rain fallen in the month of February was 2 in. 87-4

NOTICE TO CORRESPONDENTS.

Communications have been received from Mr. Callaway, Mr. J. Mr. Wansbrough, Mr. Buchanan, and Mr. Nugent.

* * * Communications are requested to be addressed (post paid)
 Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 113. MAY 1, 1823. Vol. XIX.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Case of Absorption of Morbific Matter, in the person of the Author. By T. W. WANSBROUGH, Esq., Member of the Royal College of Surgeons, London.

I BEG to observe, at setting out, that I reluctantly obtrude an account of my sufferings on the notice of the medical public; yet, having recovered from a most alarming state, I feel anxious to make known the mode of treatment to which I am indebted for my life, professing myself actuated by no other motive thereby, than the hope that the statement may prove equally serviceable to those of my professional brethren who may, in the course of their pathological investigations (as was my case), incur the same perilous risk.

On Friday, June 28th, last year, at the request of a medical friend, I assisted at the examination of the body of a female, thirty years of age. The case, on dissection, proved to be diseased ovaria; this was suspected, and, as the appearances were of an interesting nature, I shall proceed to describe them.

Upon exposing the cavity of the abdomen, an appearance presented itself in the right hypochondrium, which, at first sight, exactly resembled the caput coli, but considerably

larger. On examination, it was immediately discovered to be the right ovarium filled with pus. The left ovarium was in the same state. Proceeding with the examination in the pelvic cavity, to which our attention was now entirely directed, we found the rectum ulcerated throughout its internal surface, and adhering closely to both ovaria. Openings were also formed through the parietes of both ovaria and the coats of the rectum: these viscera, at the points of union, were in a sphacelated state. Through these openings, the matter formed in the ovaria had continued to flow, from time to time, into the rectum, until the patient sunk under hectic fever. Both ovaria were opened, and their contents filled the cavity of the pelvis. The uterus was sound, and the catamenia had appeared regularly until death.

After the examination I performed ablution most rigidly, and afterwards washed my hands with alcohol and spts. c. c. vol. The weather being very warm, the body was excessively obnoxious. The diseased organs, together with the uterus, were, however, removed with the intention of preserving them; but my alarming illness was the cause of their being neglected, and consequently lost, during the preparatory process of maceration.

On the day that I performed the examination, when pulling a rose, a thorn entered the inner part of the first joint of the right fore-finger. The wound was very trifling, and as no uneasiness, beyond a few seconds, was produced, I took no notice of the occurrence. Within thirty hours after the dissection just related, on Saturday the 29th, I felt pain in the part where the thorn entered, and, on examining the joint, there appeared a slight blush of inflammation. The pain increased, and I was obliged to extract the thorn. I could scarcely perceive the object of my search on the point of the probe. I mention this particular to show the minute channel through which the mischief entered. I did not suspect the absorption of morbid matter; my suspicions were lulled by the consciousness of having performed immediate and rigid ablution; and I therefore attributed the irritation I felt to the thorn alone. I extracted it completely at six o'clock in the evening. The pain, however, increased till eleven, when I went to bed, undetermined upon applying a poultice, because, having removed the cause (as I firmly believed), I expected the disease would cease. I was awakened, however, at two o'clock in the morning of Sunday, by the pain in the finger, which had now extended to the last joints, and the finger was considerably swollen. I then suspected the cause, and applied a poultice of bread and water, as hot as I could well bear it, over the whole hand. I continued in great pain,

which rapidly increased till six o'clock in the morning, when it became excruciating. I summoned all my medical friends within a mile of my residence, as the appalling fact then burst upon me with all its horrors. My friend Mr. Edwards, of Putney, was the first who saw me, about half-past six. The swelling had now extended to the hand, the back of which was like a boxing glove, and highly inflamed; the unfortunate finger was twice its natural size, and the skin distended to bursting. The wrist and fore-arm were beginning to partake of the danger, and the absorbents were clearly seen on both sides the arm, in an inflamed state, as far as the elbow. The fingers were extended asunder to their utmost, and the appearance of the hand altogether was terrific. A dozen leeches were applied to the back of the hand in the course of an hour, and when they fell off, the arm and hand were immersed in water as hot as I could bear it; and in that situation these parts remained until the bleeding ceased. The whole hand and wrist were afterwards surrounded by a large poultice (prepared from half a quartern loaf in a bag). The arm and hand were then laid on a pillow, where they remained during nine nights and ten days. I experienced but temporary relief from this proceeding, yet it appeared the only mode which the symptoms warranted.

Not to tire the reader with the tedious detail of the application of fomentations and poultices, suffice it to say, such was the agony I endured, that I was obliged to renew the fomentation (of hot water only) and poultice every four hours, during nine successive days and nights, and to apply eight more leeches on the third day. Such was the excessive derangement of the nervous system, produced by the absorption of the morbid matter, that the powers of the stomach were wholly suspended during the period mentioned, the tongue was covered with a thick white coat, and the countenance, I was told by my medical friends, exhibited the utmost distress. I was sustained by liquids only, as boiled arrow-root, tea, and tapioca in small quantities; indeed, I could only take a tablespoonful at a time, owing to the great irritability of the stomach. Wine was rejected at first, but at the end of seven days I became so completely exhausted by suffering and abstinence, that I appeared to be sinking fast. Wine was then exhibited, and the stomach fortunately retained it, and I received support from it. All medicine was rejected, except calomel; this alone was retained; it acted on the bowels, and kept them in an open state without producing ptyalism.

Mr. Keate very kindly attended my first summons, and continued his attention to me throughout the whole of my

perilous and painful illness. I take this opportunity of offering that gentleman my most sincere and grateful thanks for the kind and persevering attention I experienced at his hands; as also, to my good friends Messrs. Bunnett, Godrich, Lankshear, Shillito, and Wade, for their kind attentions to me during my illness.

Such was the agony I endured, that at the end of the second day, viz. Sunday, I determined to have an incision made along the whole length of the fore-finger, where the pain was intolerable, in the hope that, by lessening the tension of the integuments, I should obtain relief. A copious flow of blood from the inflamed vessels followed the incision, but without any abatement of the excruciating agony I endured.

I had great cause to regret this operation, as the increase of the irritation of the part that followed increased that of the whole system. I flattered myself, on the third day, that I felt a fluctuation on the outer side of the fore-finger; so did my friend Mr. Edwards, who, at my urgent request, opened it; a little lymph exuded, but with no abatement of pain. Determined now to abide the progress of suppuration, which I had no doubt, from appearances, would soon terminate my suffering, I comforted myself with the assurance, and the absorbents being continually cooled by the liq. amm. acet. lotion, I had the happiness to perceive that the inflammation in them showed a disposition to yield; they were never at any time inflamed above the elbow.

On the sixth day, Thursday, Mr. Keate opened an abscess which pointed on the inside of the fore-finger; it yielded, in the whole, about 3j. of pus. A tent was introduced, but the irritation and pain it produced, from the inflamed state of the parts, obliged me to withdraw it after six hours. This opening soon closed, and, on Saturday following, a second abscess was opened between the joints of the fore and middle fingers, which was found to extend to the wrist; at length, on Monday, July the 8th, the large abscess was opened, and about six oz. of pus discharged: the incision was made above, to avoid the slightest risk of dividing the branches of the radial artery situated in the hollow of the thumb, although a depending opening was to be desired. A considerable mitigation of suffering followed this operation; the poultice was changed the next day for the saturnine lotion, applied at a tepid, and afterwards at a colder temperature. In four and twenty hours after the abscess was opened, the powers of the stomach returned for the first time during ten days. In getting me out of bed, I fell, fainting, from complete exhaustion, when my friend Mr. Godrich, of Little Chelsea

who happened to be assisting me, gave me about four oz. of Sherry, which effectually restored me, and sent me to sleep for four hours. I had experienced but nine hours' rest during the by-gone period of suffering, which was an hour each night, regularly, from twelve till one. Sleep I cannot call it, for I was imperfectly sensible of surrounding objects; it was exhausted nature sinking under the pressure of urgent disease, to rise again and renew the struggle as soon as, by quietude, she renewed her energy. The steam arising from the hot water in which my hand and arm were immersed in such rapid succession (every four hours), the fermented effluvia of the numerous poultices, increased by the heat of my hand, and the fatigue attendant on the operation (for I applied them all myself—the agony I endured, and the extent of nervous irritation, prevented me from suffering any one to come within reach of my hand), all combined to exhaust my strength and spirits; these, aided by the total abstinence from all food, save what I have mentioned, and the heated state of the atmosphere, in July, left me at the end of the eighth day, almost in articulo mortis. In ten days my whole hand was in one abscess, the matter had insinuated itself beneath the palmar fascia, and a sinus existed from the ends of the fingers to the ulnar ligament. Mr. Keate saved me the operation of the director and bistoury, and adopted compresses instead. The result was as satisfactory as could be wished. At the end of twenty-one days, I was enabled to seek a change of air, and a three weeks' residence at the sea-side restored me to perfect health.

If I may be permitted to offer a remark on this, to me important, case, I might say, that, had I not been awakened to a sense of my danger on the morning of Sunday, when the inflammation of the absorbents had reached my elbow, my situation would have been deplorable indeed. Since the lamented death of the late Dr. Pett, I have become more sensible of the narrow escape I experienced, as, previously to that distressing event being announced, I thought my recovery attributable to the prompt attendance of my friend Mr. Edwards, and the expeditious adoption of the measures that were determined on. I should be guilty of a flagrant dereliction of gratitude and duty, were I not to acknowledge his kindness also on the occasion, and for which I beg to tender him my best thanks.

Had I suspected the absorption of morbid matter, I should, in all probability, have applied caustic. I can only say, I am heartily glad I did not. It appears that there was a difference in the case of the respected Doctor; but as no authenticated account of it has yet been published that I

know of, I cannot form an opinion, beyond the fact that the two first incisions of my finger produced a great accession of irritation and consequent suffering, which, I am confident, might have been avoided by abstaining from every application save emollient ones, such as were calculated to soothe the perturbed state of the parts, and allay the cause of all the mischief, viz. the inflammation of the absorbents. This was effectually accomplished by the leeches, fomentations, and poultices. Local means, I might almost say, entirely accomplished the desired end, as, from the sympathy of the stomach, I could take no medicine, save a few grains of calomel.

It might, perhaps, be said, that dispersion by resolution would have been a far more eligible mean of cure. It was attempted, but without effect; such was the high state of irritation, that all cold applications to the hand increased my suffering, although I bore a great deal in persevering with them for about ten minutes after the second application of the leeches. I bore the lotion to my arm very well, and I experienced the beneficial effect of it on the absorbents there, but the moment it touched my hand I was in torment. I therefore adopted the emollient plan, for two reasons, first, because it afforded me a mitigation of suffering, and, secondly, because such was the determined virulence of the virus which had infected the part, that there appeared no chance of arresting altogether its devastating influence, and my only conclusion was, to risk my hand to save my life.

From the almost total absence of fever during my attack, I had nearly forgotten to mention the fact, I suffered very little from this invariable concomitant. A few effervescent draughts were all that I required; thirst I had none, as the continual nausea produced a copious secretion of the salivary glands: it is not impossible that an increased action of them was produced by the calomel, but the quantity I took never exceeded six grains, and that but once — (I took in the whole eighteen grains). The flow of saliva commenced on the morning of the second day; I had not taken calomel then; part of a cathartic draught was retained and acted; the secretion increased till I took calomel, but not afterwards. I leave the inference to be drawn. A remarkable effect has succeeded the termination of the case; the scalp suffered so severely as nearly to require a wig. I have, however, recovered my natural one, which is nearly restored to its former state. My general health has considerably improved; in fact, my system appears to have benefited by the shock which it received. "Out of evil proceedeth good."

Fulham, 14th March.

II.

Case of Constipation, occasioned by a Stricture of the Colon at its Sigmoid Flexure, and terminating fatally. By SAMUEL HENRY STERRY, Esq., Fellow of the Royal College of Surgeons.*

ON Monday afternoon, February 3, 1823, I was called upon by Mr. Joseph Barton, ætat. forty-four, who complained of occasional abdominal pain, chiefly confined to the umbilical region, which seemed to be of a colicky nature; and as the bowels had not been relieved more than once during the day, I ordered him a dose of calomel with extr. colocynth. that evening, and a draught for the morning with sulphas magnesiae and infusum sennæ: this had only produced one evacuation, and as he complained of a disposition to sickness, I thought it necessary to take some blood from the arm, and to order him another lenitive draught; this not producing more than a single motion, I repeated the aperient draught in the evening and morning. The pain still returned at intervals, without the appearance of any constitutional disease; but as he was of a plethoric habit, and as I had heretofore had occasion to treat him for severe pains in the head by general and topical bleeding, I advised him to abstain from business, to take mild nutritious diet, and to persevere through the week with the neutral salts in the infusion of senna, combined with the use of calomel or blue pill, with extractum colocynthidi compositum, at bed-time. On Saturday the 8th he was at business. On the morning of Sunday he went to the Magdalen in a close carriage, walked home, and took some chicken for his dinner, from which he felt uneasy, but he did not send for me until Monday morning the 10th. At this time the bowels had not been relieved, and the uneasiness had increased; this was the first day the bowels had altogether ceased to act. I therefore ordered a purgative mixture, which not producing the desired effect, and the uneasiness augmenting, Dr. Walshman was called in, who ordered him to lose fourteen oz. of blood from the arm, to use the warm bath, and to take a dose of pills every four hours, consisting of two grains of calomel, with five of extr.

* This case excited so much painful interest in the district where it occurred, not only from the unusual circumstances attending it, but also from the amiable manner of the sufferer, that we feel extremely indebted to Mr. Sterry for his politeness in enabling us to lay it before the Profession. — EDITORS.

colocynth. co., and five of jalap; in the intermediate times a saline effervescing draught was administered; Dr. W. also recommended cathartic injections. Thus, in about twenty hours, he had taken fourteen grains of calomel, with ℥ij. of extr. colocynth. co., and two of jalap, combined with the use of constant fomentations and of several injections, but without producing any motion, if we except the evacuation of some scybalous matter from the inferior part of the rectum: the stomach, indeed, rejected every thing. He passed a very restless night, the pulse beating from 90 to 100. On the morning of the 11th, the pills and draughts were ordered to be repeated; these were constantly rejected: he was again bled, but there was not the smallest appearance of inflammatory buff on the blood. In the evening, Dr. Maton met Dr. Walshman, in consultation, and, after strict investigation, the disease was considered to be a case of intus-susceptio. It was agreed to try the ol. crotonis tiglij, one drop of which, in the form of pill, was directed to be given every four hours; the warm bath was also continued, which seemed to afford temporary ease; and the effervescing saline draught was persevered in; three pills were taken, but each returned at an interval of from one to two hours; no operation on the bowels had taken place, but a sense of heat was felt in the throat and stomach; consequently, no more pills were administered at that time. He passed a very restless night, the pulse continuing much in the same state. On the morning of the 12th, Dr. Walshman prescribed the following pills:—

R Cambog., gr. iv.
Pulv. Scammon., ℥j.
Pulv. Jalap., gr. xv.
Hydr. Submur., gr. vj.
Tinct. Aloes, q. s. M.
ft. pil. viij.; cap. iv. 4tâ quâque horâ.

These were also rejected, with every kind of mild drinks, although given in small quantities; injections with decoctum pulpæ colocynthidis et sennæ were also repeated several times without effect. In the evening Dr. Maton advised a continuance of the pills, and also the administration of the oleum terebinthinæ, of which two ounces were given at twenty minutes past ten; part of this soon returned, and he was then quiet till about twelve. At half-past twelve he took an effervescing draught, and was restless till one, complaining of heat in the throat and stomach, from the oleum terebinthinæ: the abdominal uneasiness was rather lessened, and he remained tolerably quiet till twenty minutes past two; still, however, the vomiting continued, with frequent ineffec-

tual efforts to relieve the bowels. I again tried to exhibit an injection, but there was such considerable resistance that only a small quantity passed, and the patient appeared distressed from the attempt. At ten minutes past six in the morning of the 13th, the dose of oleum terebinthinæ was repeated, which produced great uneasiness, with a violent convulsive state of the body; vomiting succeeded, and continued for some minutes; he likewise felt much heat in the throat, but without experiencing the same general warmth through the bowels of which he had made mention after the first dose. He again attempted, but ineffectually, to evacuate the bowels: from this time the vomiting ceased. In the afternoon, Sir Astley Cooper was consulted, whose opinion coincided with that before given by Drs. Maton and Walshman; he, however, suggested the propriety of again trying the croton oil, which, after the second dose, was attended with the same gastric uneasiness, without producing any effect on the bowels. In the evening, Dr. Maton again visited him, who, finding every effort unavailing, and considering it an almost hopeless case, advised us to try the hydrargyrum purificatum, in the dose of two ounces; this was three times repeated, but no portion passed the bowels: considerable tenderness had now taken place, with abdominal distention. On the 14th, Sir A. Cooper recommended a blister and three grains of calomel every four hours; this dose was regularly repeated for two days. On the 17th, the oleum ricini was tried, a few doses of which appeared to sit easy on the stomach, but it was as ineffectual as all the other remedies. From this day to the 21st, common saline draughts, mild nutritious drinks, with wine and water occasionally, were all retained; in the afternoon of the latter day, much anxiety and uneasiness prevailing, one grain of opium, with three of calomel, was given every six hours, which allayed the irritation for a considerable time; and he continued much in the same state till Monday the 24th, when he became more uneasy from increased distention, accompanied with great thirst; the anxiety to allay which brought on vomiting, and he expired about ten in the evening, having lived three weeks from the time of requesting my advice, and two weeks from the commencement of urgent symptoms. Dr. Maton did not repeat his visits after the 13th. A considerable quantity of yeast was given after the failure of other medicines, which seemed grateful to him. The pulse, during the progress of the disease, varied from 100 to 130. The patient seemed to suffer more from extreme flatulency throughout his illness than from excessive pain, which latter symptom occurred only at

intervals. Sir A. Cooper having considered it a case of intussusception, advised the constitution to be moderately supported, under the idea that the invaginated portion of the intestine might slough, and thus a favourable termination be produced. It may, perhaps, be right to observe, that the vomiting, which was constant from Tuesday the 11th till the evening of Thursday the 13th, did not recur until within a few hours prior to his dissolution, and that the head was never affected during the illness. It was most distressing to observe a patient perfectly tranquil in mind, without the slightest prospect of overcoming the disease.

The body was opened by my son, in the presence of Sir A. Cooper, Mr. Callaway, and myself, when the following appearances presented themselves:—

On opening the abdomen, all the intestines, excepting the rectum, were found exceedingly distended with air, inso-much that it was very difficult to cut through the peritonæum without doing injury to the intestines. Wherever the intestines were in contact with each other, red lines, from the adhesive inflammation, marked their disposition to unite. The derangement which produced death was situated at the upper part of the rectum; the sigmoid flexure immediately above it was much distended, and the cæcum enormously enlarged. At the termination of the sigmoid flexure of the colon, and at the beginning of the rectum, a stricture was found completely encircling and obstructing the intestine, which was very much ulcerated. This was the cause, and the *sole* cause, of the impediment to the passage of his motions, and of the fatal issue of the case.

The inner coat of the intestine was also thickened, and had a carcinomatous appearance.

No material quantity of the quicksilver was discovered, except in the small intestines, where a small portion was found adhering to the inner coat; the whole of the alimentary canal, however, was so loaded with a prodigious quantity of fermented matter, that it would have taken up more time than, under the particular circumstances of the case, was admissible, in order to arrive at any certain conclusion respecting the quantity of that substance actually contained in the different portions of the intestinal tube.

Grange Road, April 9th, 1823.

III.

Facts and Observations on Small-pox and Chicken-pox. By
WILLIAM JACKSON, Esq., Sheffield, Member of the Royal
College of Surgeons, London.

THE immediate cause of death in small-pox has been ascribed to various morbid states, the condition of which has generally been admitted to be inflammatory, and their seat in the head, chest, or abdomen;—one dissector finding the fatal cause to have been situated in the brain, another in the respiratory organs, and a third in the intestines.

In a few examinations which I have made, the head was the part which had been the seat of the most serious disease internally.

There is no symptom more alarming, none more constant in small-pox, than affection of the head, marked, at an early period, by an agonizing headach, intolerance of light, and a sudden starting from apparent sleep; and, in the latter stages of the disease, by a gradually approaching stupor. It is by no means intended to deny the operation of other concurrent causes; it is merely meant to contend, that by an attentive survey of the symptoms, and of the post mortem appearances, the head will be generally found to have been the seat of the cause producing the fatal issue.

The respiratory passages are sometimes the seat of disease in small-pox, but certainly not so invariably as some have contended. This is a subject which has been very ably treated upon by Dr. Gregory in a late Number of this Journal.

In October and November, 1819, during the prevalence of small-pox, I availed myself of several opportunities of inspecting the morbid appearances after death, and in almost every instance found the following conditions:—Effusion of serum into the ventricles of the brain, in considerable quantity; the membranes of that organ opaque and thickened, and its substance highly vascular. The subjects were all under six years of age; the disease was of the confluent species, and its duration about twelve or fourteen days, a comatose state having preceded death one or two days.

There can be no doubt that the fatality in small-pox arises frequently from an almost total suspension of the cuticular function; but our inquiry is—what is the next link in the chain of causation? and I would say, that the previous state of excitement having produced its effects chiefly on the head, which is now rendered highly susceptible of morbid impressions, or probably quite in a state of diseased action, and an additional source of disturbance arising in the system in

consequence of the highly morbid condition of the surface the brain and its membranes eventually become the most seriously involved in morbid changes, which are incompatible with life.

The simultaneous occurrence of modified small-pox in several children of the same family is a singular fact, which has been noticed by several writers, and ascribed to a high degree of susceptibility for cutaneous affections in such families: this is, perhaps, the most plausible way of accounting for a very obscure circumstance.

During the late epidemic, I witnessed thirty-three cases of modified small-pox, of which twenty-four occurred in seven families, in two of which there were ten (or five in each) attacked; in one, six; and in four other families there were in each two affected.

I now arrive at the principal object of this paper, viz. to offer my further* experience, tending to disprove the identity of chicken-pox and modified small-pox.

In December, 1821, my attention was attracted by several children, residing in Hawley Croft, in this town, being affected with an eruptive disease, preceded by a smart attack of fever. The vesicular character of the eruption upon these little patients left no doubt upon my mind of the nature of the disease — it was, in fact, what I had formerly been in the habit of designating chicken-pox. Those children which had been vaccinated, and which were under the influence of this disease, had satisfactory depressions upon their arms.

The objects of my inquiry were — how the disease had originated, what was its general character, and whether or not there could be found, associated with it, cases of small-pox, and to ascertain if this latter disease prevailed in the neighbourhood of those patients. From the most attentive investigation, it appeared evident that this eruptive disease originated in Albion Row about the middle of November; that it there affected, indiscriminately, the vaccinated, those that had had small-pox, and others unprotected; and what is very remarkable, in all those subjects the constitutional and cuticular affections were similar in degree, duration, and appearance.

The following is the general description of the disease: considerable febrile excitement of one, but generally two

* See REPOSITORY for January, 1821, in which will be found some observations upon this subject.

From inadvertence, there appear some inaccuracies respecting the dates in the communication referred to. In Woolhouse's case, the dates 14th, 15th, and 16th, should be read — 10th, 11th, and 12th.

days' duration, after which there was a sudden appearance of papulæ, which almost immediately became vesicular. The vesicles appeared solitary and in clusters, and were surrounded by an erythematous efflorescence irregularly diffused; and they arose successively during the continuance of three, four, or five days. This disease corresponded with the third species of varicella described by Willan. The vesicles were large, and their base not exactly circular; and some of them, in the progress of the disease, became pustular, or, at least, changed their colour to a light yellow; others shrivelled after the evacuation of their contents. The fourth and fifth days from its appearance, the eruption began to decline; or rather, those vesicles that had first come out then commenced shrivelling; so that in their progress towards the height, as well as on their subsidence, various states of advancement were visible.

In some cases, on the decline of the eruption, a considerable hardness was felt; more, in fact, than could be accounted for by the mere collapse of the vesicles. The general mildness of the disease may be estimated, when it is known, that in very few cases was medical aid sought for; and it was then more from a curiosity on the part of the mother to acquire information of the nature of her child's complaint, than from apprehension of its danger, that application was made to medical Practitioners.

The following cases occurred in one family. They are purposely stated very briefly, the most essential points only being noted. Mary Brown, aged six, vaccinated, had a smart attack of fever (December 2d) two days previously to the appearance of an eruption of vesicles; whether or not preceded by papulæ, could not be distinctly ascertained. The febrile symptoms now abated. During the course of three days, different parts of the surface became successively covered with patches of eruption. There was no regularity in its distribution. On the fourth day from their coming out, the vesicles assumed a yellow tinge, which gradually became deeper, although, on puncturing them, a clear fluid issued forth: till this period they precisely resembled the effusions resulting from a slight scald, and, on their decline, left no hardness, except that slight irregularity of the surface occasioned by the desquamating cuticle.

Ann Brown, sister to the former child, three months old, unprotected, was seized on the 10th of December with rather severe febrile symptoms; on the 11th, an eruption of vesicles was visible upon her back and abdomen. These vesicles underwent very little change of colour, and began to decline on the 16th.

A little boy, aged three, brother to the two former children, vaccinated, was subsequently attacked. The constitutional and cuticular affections were precisely similar to those of the children whose cases have been just given.

There were no cases of small-pox in this neighbourhood at the time of this epidemic, if it deserve that appellation, nor had that fatal malady prevailed here for the two previous years. The disease ranged over a space of about one mile; and it is probable that not fewer than two hundred children were affected by it, of which, however, not more than fifty were seen by me.

When I first perused Dr. Thomson's work on variolous diseases, my mind was not a little perplexed, and I was unable to say from recollection, whether a varicelloid epidemic, uncombined with small-pox, had ever occurred to my notice.* It was not that I had not observed chicken-pox to prevail at a time when, and in a situation where, no cases of small-pox could be found; but the novelty of the idea lately promulgated had not excited that interest which now prevails in the medical world upon this subject. Some may contend that the avowal of the opinions alluded to is merely a revival of those of the older writers; but it does appear that their diagnosis of cutaneous diseases was in a state of great imperfection.

It may be contended by the advocates for the identity of chicken-pox and small-pox, that the disease I have described was vesicular small-pox — indeed, this is an inevitable conclusion at which they must arrive; but in what plausible way would they account for the uniform aberration, in this instance, from the usual course of disease, since in many cases (perhaps one-third of the number) there appears to have been no assignable modifying influence? Here we observe all indiscriminately affected in the same way; an eruption is displayed, differing much more widely from the character of genuine variola than this latter does from what is very properly termed modified small-pox. When small-pox appears in a vaccinated individual, its character is confessedly changed, and, unlike the disease above detailed, it seems to be as efficient as the unmodified disease in originating the true small-pox in the unprotected, or in giving rise to a disease similar to itself in the vaccinated, either by contagion or inoculation.

Having repeatedly attempted to communicate the genuine

* This was a query which could not be decidedly answered by any of the members of the Medical and Surgical Society of this town, before whom the substance of this, and my former paper had been read.

varicella, by inoculation, to those who were unprotected by vaccination or small-pox, and having as often failed, I cannot but regard the circumstance as strongly corroborating the opinion of a specific difference in the two diseases. If small-pox, under all its usual modifications, be communicable by inoculation, and varicella not so, although the fact (if esteemed such) constitutes but an indirect proof of their non-identity, it goes far enough, I think, to induce us to infer an inherent difference in their nature.

We frequently observe chicken-pox appearing in a family, without our being able to trace the disease to any source of contagion, and without any further subsequent extension; hence it is probable, this disease is very slightly contagious, and but seldom or never appears as a widely spreading epidemic.

I had occasion lately (in October, 1822) to witness chicken-pox occurring in two families, two children in one, and one in the other house being affected. It could be traced to no source of contagion, and it ceased without spreading any further.

A child, four years old, being the second attacked in the family first affected, was an example of the severest case of this disease I remember ever to have seen. Candour obliges me to state some particulars of her case. Preceded by high febrile excitement of two days' continuance, there appeared an eruption of papulæ, upon which vesicles soon were visible. These gradually advanced to a magnitude very unusual in this disease, and ceased not to appear for four or five days; and whilst some exceeded not a line in diameter, others acquired the size of the largest garden pea; one, especially, upon the inside of one of the thighs, equal in size to a hazelnut, had much the appearance of pemphigus. These vesicles gradually acquired a straw colour as the disease advanced, and on its decline communicated to the finger considerable hardness and irregularity. There are now (a month after the appearance of the disease) visible depressions in the situation of the eruption; but these depressions are even excavations, not such as result from the cellular pock.

The children of these families communicated freely with those of their neighbours, but without the disease spreading further. The character of the eruption in the other two affected was more diminutive than in that individual whose case has just been detailed.

On the fourth day of the eruption of the severe example above stated, I obtained a large supply of serum from one of the vesicles, and carefully inserted it into the arms of a child, three months old, unprotected, but there was no communica-

tion of disease, nor even inflammation in the situation of the punctures.

It is proper to state, that there has not been a case of small-pox in this place since 1819.

Dr. Thomson has called upon the Profession to answer the following query: — “*Have you ever had occasion to see chicken-pox prevailing epidemically without cases of small-pox occurring amongst them?*” And in his second Letter to Sir James M’Grigor, lately published, the learned Professor states, “that none of those who contend for the existence of this species of chicken-pox as distinct from modified small-pox, have given us any information with regard to the duration of the disease which they have denominated chicken-pox, or of the proportional number of cases in which this particular form of eruption occurs in individuals who have neither had small-pox nor cow-pox, compared with that in which it occurs in those who have gone through these diseases.

“That the vesicular or bullose chicken-pox have been observed to arise in unvaccinated infants from the contagion of small-pox, and that this form of varioloid eruption has not hitherto been observed to prevail epidemically, independently of small-pox.”

After the perusal of the facts herein produced, which I thought it my duty to make known, sorry as I am that they have not fallen into more able hands, I leave this interesting question for the Profession to determine.

March 20th, 1823.

IV.

*On Somatopsychonologia.** By ANTI-PHILOSTRATUS.

AFTER the very masterly work of Dr. Barclay on Life and Organization, a work which is equally honourable to him as a scholar, a critic, and a Christian, I did not expect that we should have heard more on the subject. A writer, however, under the signature of Philostratus, has thought expedient to revive it, under the plea of considering himself as one of those included by the advocate of the Hunterian doctrine of life, under the opprobrious term THE PARTY. Whether this

* Somatopsychonologia; showing that the Proofs of Body, Life, and Mind, considered as distinct Essences, cannot be deduced from Physiology, but depend on a distinct sort of Evidence; being an Examination of the Controversy carried on by MM. Laurence, Abernethy, Rennell, and others. By Philostratus. 8vo. London, 1823.

As this work is anonymous, the author of these remarks on it considers it unnecessary to affix his name to them.

were the case or not, I cannot pretend to say; but it has furnished the learned author with an excuse, after an interval of six years, for giving to the world his physiologico-material opinions. This he has done in a thin octavo, under the sesquipedalian title of *Somatopsychonologia*.

As this work contains nothing that is new, the observations I shall have to make on it will not be many, and I shall endeavour to be brief. I shall pass over Philostratus's theology, taking leave only to observe, that I presume he was bred a Catholic, as he calls the reformed churches little Protestant *heresies*, and as he considers the pretended (why pretended?) reformation as the main cause of our diminished expectations of a future state, our spiritual darkness, our lax morality arising out of Calvin's blasphemous doctrines (query, did he ever read Calvin's Institutes?), and of our forgetfulness of the groundwork of faith and hope in the church. These and other theological matters I shall leave to be combated by a second Rennell or Grinfield, should they think them deserving of notice. I shall also leave untouched every thing relative to organology, notwithstanding the information of Dr. Forster's having recently discovered a new cerebral organ, which the learned Doctor has designated by the euphonous name of the "organ of mysteryingness!" All these I consign to the able correspondent of Christopher North, Esq. whose argumentative essays in some recent Numbers of Blackwood's Magazine, the craniologists, craniocopists, organologists, or whatever they choose to term themselves, would do well to peruse.

In section the first, the author talks of an obscure school of anatomy in Windmill Street. Having been educated at that school, though it is some years since I have had any communication with it, I cannot but feel some interest in its honour. What! is the school where that accomplished scholar, that excellent anatomist, that most eloquent lecturer, Dr. Hunter, where the concise and accurate Baillie, the diffuse Cruikshank, the plain and unassuming Wilson, lectured, and where that surgical phenomenon, John Hunter, began his brilliant career, now shrouded in obscurity? Do not Mr. Charles Bell and Mr. Shaw understand anatomy? or is it that they are too much of Englishmen, too much like Dr. Barclay, to contaminate their lectures with the cheerless and pernicious materialism of French philosophers and French physiologists?

In section the second, the author says, that in contemplating the order of things, we should unavoidably be lulled into a belief that the material atoms of the universe contain within themselves the cause of their own phenomena, were it

not for what we are taught in our childhood, that a spiritual Being caused and supports the whole.

To suppose that any person would believe that material atoms could of *themselves* originate animal and vegetable organisms, possessing life and perception, is an opinion too absurd, we should think, even for a physiological materialist. It would be to give to those atoms design and intelligence. But what absurdity is there that such philosophers will not maintain? Tell them that the mind must be something different from matter, and that the Deity is not to be confounded with the universe, they answer you, like the mathematician, who, after perusing the Iliad, replied he found nothing proved, there are no proofs. We want, say they, something visible, something tangible. With respect to mind, we see nothing but the cerebral mass, and what is that mass? An assemblage of material atoms, and mind is only the agitation or motion of these atoms. Then, as to that Being you term God, he too is inaccessible either to the sight or touch. All that we behold are the sun, stars, and planets, the earth on which we live, with its various animals, vegetables, and minerals. But wonderful and beautiful as are these animals and vegetables, those revolving planets, those brilliant stars, they afford no proofs of a Being distinct and different from the universe: there is nothing, therefore, but the universe.

In the next section, the author examines Mr. Abernethy's doctrine of life and mind, and affirms, that these two supposititious existences, for so they are termed, have never been discovered, that physiology goes not farther than organization, and that they cannot fairly be deduced from physiology.

If the author mean, that the living principle and mind have never been seen and handled, no one, I believe, will dispute the point with him; but if he mean, that they cannot be fairly and legitimately *inferred* from the phenomena, then I must deny the position, because the phenomena cannot otherwise be satisfactorily accounted for. We are told, indeed, that the cause of these phenomena, as well as the resistance to putrefaction, are certain affinities between the particles of living bodies, constantly in play while their functions are performed, and when these cease, they become subject to other affinities more powerful, which are chemical affinities. In answer to this circuitous mode of explaining things, it is enough to ask, what is the *cause* of these affinities, and the susceptibility of the corporeal particles to this play?

In the last section, the author, after telling us in a note that Paley was a bad anatomist, considers his inference, that as on finding a watch we should infer a watchmaker, so, on con-

templating the universe, we are led to believe in an Omnipotent Artificer, to be bad reasoning; because, he says, we infer, that a watch had a maker, solely from the experience that such instruments have been made by watchmakers, but that we have had no experience that worlds were made by God.

Now, if I rightly recollect Paley's statement, there is no more of experience in the one case than in the other. In the first, the hypothesis is of an Indian finding this watch, and upon examining its mechanism, inferring that it could not have *made itself*. Why, in the second, then, the situations being similar, are we not to infer, that the universe, with all its wondrous mechanism, had, like the watch, a maker? I shall be told, perhaps, as the *Système de la Nature* tells us, that the universe is not a work, and exhibits no marks of design; to which I reply, the difference between the watch and the universe is that the former is a work of *human* design, the latter that of *Divine* design.* The author continues, and also informs us, that though Paley was no ignoramus (prodigious!), yet that he was a great gormandiser, had often eaten a whole shoulder of mutton at a meal, and that, as a learned Physician has proved that a light vegetable diet clarifies the intellect, it was owing to his inordinate meals that he stopped short of those piercing and ethereal coruscations of genius displayed by the late Percy Bysshe Shelley!!

How unfortunate for their country, and perhaps the world, that Paley and Johnson (for Johnson too was a gormandiser) should have been so partial to animal food! Had a light vegetable diet clarified their intellects, instead of the commonplace puerile morality of the Rambler, and the inconclusive evidences of the Natural Theology, we should have had the refined and liberal morals of the Queen Mab, and the strong proofs of a belief in a Deity, as they stand recorded in the Album! How unfortunate, let me repeat, and how yet more unfortunate, that the majority of their countrymen should so much resemble them! The savoury sirloin and grateful shoulder still smoke on their tables. Notwithstanding, therefore, the exception of a few herbivorous individuals, the learned Physician, the anti-Newtonian Knight, perhaps Philostratus himself and their followers, we must, as a nation, be considered as eminently carnivorous; of consequence, how extensive, how profound soever may be our researches into nature, we can arrive no farther than this absurd, this unphilosophical conclusion, that a God exists.

April 8, 1823.

ANTI-PHILOSTRATUS.

* See Estlin's sermon on Atheism, in which the sophistry of such writers as Diderot, Depuis, and his follower Volney, is ably refuted.

V.

On Acupuncture. By JAMES MORRIS CHURCHILL, Esq.,
Fellow of the Royal College of Surgeons.

WHEN I published my little treatise on acupuncture, I expected to be questioned about it by individuals, who were too polite to tell me that I had asserted what was not true; at the same time that their countenances clearly indicated the incredulity with which they viewed it. Still I persisted; and the value of the remedy has been most satisfactorily ascertained and confirmed in the practice of several individuals, who are willing that nothing shall be left untried which appears likely to relieve that painful disease for which it is more particularly recommended. I say "*for which it is more particularly recommended,*" because many valuable remedies are lost sight of, from being injudiciously employed by those who are too fond of *analogical deductions*.

Its success has now been so conspicuous, that I can assume an air of triumph, and dare any one to express his disbelief in what I have asserted respecting it. I am continually hearing of successful cases from respectable members of the Profession; and expect soon to lay a body of evidence before the public, which shall dissipate the most obstinate scepticism. In the meantime, from my own practice, I select the subjoined cases for the perusal of your readers, that they may be induced to practise an operation that is so simple, so painless, and so convincingly efficacious; and it will afford me much satisfaction to receive succinct accounts of its effects from any gentleman who may feel inclined to employ it.

Case 1st.—George Jackson, a labouring gardener, about fifty years of age, became the subject of rheumatism three or four years ago, in consequence of exposure to wet and cold. The neck, shoulders, back, and hips, were occasionally the seat of the disease. Guaiacum and opium were usually had recourse to upon an attack taking place, and generally with decisive benefit. At the beginning of the year, however, his disease lost its erratic character, and fixed itself upon the deltoid and the greater pectoral muscles of the left side. The remedies accustomed to relieve him now failed of their former beneficial effect; and though cupping and blistering, with external irritants, were conjoined, the disease remained unsubdued. I conceived that this was a fair case for acupuncture, and, accordingly, performed the operation in the following manner:—A needle was introduced about midway

between the point of the shoulder and the insertion of the deltoid muscle, which pierced through the belly of this muscle until its whole length (one inch) had passed. The patient became sensible of relief before the needle had reached more than two-thirds its whole depth, and when it had completed its greatest depth, he observed that the pain of this part had entirely left him: it was allowed to remain five minutes, when, at his request, I withdrew it, and introduced it at the side of the chest, about three inches below the clavicle, intending to pierce the fibres of the pectoralis major. The pain of this part, which had now been much affected by the first operation, ceased as soon as the needle had rested two or three minutes, and after it had remained five I withdrew it, leaving the patient entirely free from pain. Previously to the operation, he had been incapable of lifting the left arm, and had been obliged to feed himself with the right hand alone, from the inability of carrying his left to his mouth. He now reached his hat from a peg where it hung at the height of his arm's length, and replaced it on his head, without experiencing the least stiffness or uneasiness in the arm or shoulder; and though, upon his resuming his occupation, he found his efforts impeded by a sensation of debility in the parts about the shoulder, yet it was neither sufficient to interrupt his daily exertions, nor to lead him to seek for any further medical assistance; and in a week or two he felt no remains of the disease.

Case 2d.—In February last, Thomas Field, ætat. forty-five, residing at No. 5, Richmond Street, came to me with such an intense pain in his back (induced by working in a damp cellar), that he walked with great difficulty; he could not raise himself into the erect position, and one of his legs dragged after him, almost useless. He had been subject to lumbago several times before, and had been treated for it by various medical men with the usual medicines; but his recovery had been, in every instance, slow and protracted. I introduced two needles, two inches in depth, into the muscles of the loins, which in some degree lessened the violence of the pain in a minute or two. Finding that the disease was not removed, but mitigated, I passed a *third* needle and a *fourth* into the lumbar mass of muscles; and a few minutes having elapsed, I inquired how he was? he replied, that he "*felt no pain.*" But he was sceptical as to its having removed the disorder, for his first attempt to move after the needles were withdrawn was made with the greatest caution; and when he found that he was really freed from the disease, he could not divest himself of the fear that it would immediately recur. I heard nothing of him for two days, when

his daughter called on me, and informed me that her father was quite well, and had resumed his employment as a wine-merchant's cellar-man.

Case 3d. — William Webb, ætat. forty-eight, of No. 2, Richmond Street, applied to me for assistance for a violent pain in the lumbar region, with which he awoke at four o'clock in the morning. It extended to the intercostal muscles on both sides, and was so intense that he had been in a continued state of profuse sweat. *Flexion* of the body and coughing much aggravated his suffering, but his general health, which is never good, was not rendered worse. In the presence of Mr. Fernie, jun., of Kimbolton, I introduced a needle on each side of the spine, when he instantaneously complained of the pain shifting to the upper part of the sacrum. Having invariably found this to be a favourable occurrence, I was encouraged to introduce a needle into each of these parts; and on removing them at the end of five minutes, my patient was enabled to put the body into many different positions, without feeling any pain in the *back*; and the only inconvenience he experienced in the intercostal muscles, was a sense of constriction when he attempted violently to bend the body. I prescribed four grains of Dover's powder to be taken every four hours, and desired to see him the next morning; when he stated that he had remained free from suffering for several hours, but then had a slight pain situated about three inches *above* the sacrum. On using a needle to this part, he suddenly started, and stated that the pain had *flown* to the intercostal muscles of the tenth and eleventh ribs, (to use his own words) "as if a person, from the inside, had bobbed his finger against the part." I now withdrew the needle, and inserted it there, which effected perfect relief, as he has continued well ever since.

13, Princes' Street, Leicester Square, April 4, 1823.

VI.

Case of Poisoning by Corrosive Sublimate. By WILLIAM BUCHANAN, Esq., Member of the Society of Apothecaries, &c. &c.

BEING hastily requested to visit J. G., who was suspected of having taken poison, I did so, and found him with his mouth half open, from which he was in vain endeavouring to get rid of a quantity of ropy mucus — his lips and tongue were whitened, and having somewhat of the appearance which a sore puts on when washed with a solution of nitrate of

silver, my first impression was, that this substance had been swallowed. His countenance expressed much anxiety, and his hands, placed over his stomach, suggested that it was the seat of severe pain. He refused to give any account of the cause of his symptoms, but considering I had sufficient evidence of poison, and not choosing to waste time in inquiry, I determined on exhibiting a solution of sulphate of zinc. Of this, partly by entreaty, and partly on compulsion, he swallowed in the course of ten minutes about six ounces, containing four drams of the salt: he now acknowledged that he had taken a quarter of an ounce of sublimate. Copious vomiting, which soon came on, was encouraged by as large draughts of milk and water as we could prevail on him to swallow; but the pain and difficulty in deglutition, arising from the swollen state of his mouth and throat, would have rendered all our entreaties useless, had not the greater and almost intolerable pain at his stomach compelled him to avail himself of every means of relief. In the short intervals which were allowed to take place between vomiting and swallowing, we learned from him, that he had been so determined on self-destruction, as to have taken, twice that morning, what he thought sufficient for the purpose. He had swallowed what he had obtained on asking for sublimate two hours previously, but finding no effect (from which it is evident something else had been dispensed), he had applied at another shop for a like quantity, a quarter of an ounce, which was unfortunately given genuine, and in crystals. He took the whole of the first dry, that is, alone and unmixed, and attempted, by pouring it from its wrapper, to take the second in the same way: of this he had taken much more than half, but although he endeavoured to swallow it hastily, the taste, and the instant effect on the mouth and throat, prevented his taking the last portion, which was left in the paper and thrown down the closet, to which he had retired for the purpose of taking it. Vomiting was kept up for several hours by the solution of sulphate of zinc, and, in addition to the milk and warm water, he took frequently the white of an egg. The pain at the stomach continued to be very severe, as well as the heat, swelling, and soreness of his mouth and throat; the difficulty of swallowing was very great, and the pain produced by it very much greater than any occasioned by the act of vomiting, and perfectly independent of it. It seems necessary to remark this, as it has been objected, that the quantity of sulphate of zinc used, nearly an ounce in the whole, was more than could be necessary: but after the first action of it, the effect was easily reproduced, and I saw no comparison between hazarding a somewhat inconvenient

effect, which could subside when we pleased, and running the risk of the retention of any of the oxymuriate. I may make, should it be necessary, the same excuse for having given the whites of eighteen eggs, and several pints of milk and water. In such a case we ought not to be sparing of remedies. In the course of the evening he took three ounces of castor-oil, and had several evacuations. He also continued his draughts of milk and albumen. The pain of the stomach, though still severe, was more tolerable; that of the throat was still urgent, rendering articulation indistinct, and almost threatening suffocation. He continued the use of his diluents; all his complaints were gradually subsiding; and, after forty-eight hours, he was so far recovered that he went home to his friends in a distant part of the town. Since that time I have not seen him, but have learned that at the end of a week he was quite recovered. I should have stated that no salivation attended his recovery, or any other symptom indicative of the absorption of mercury. He is in person athletic, about twenty years of age, by business a goldbeater, and having sometimes occasion to use oxymuriate of mercury, he knew it as a poison. The only importance to be attached to this case, is so far as it confirms the value of early, copious, and continued vomiting, and the effect of albumen as the best remedy against such parts of this poison as may not have been rejected.

Finsbury Terrace, April 13th, 1823.

VII.

Case of Scrofulous Inflammation round the Knee-joint, treated principally by Cupping. By LAWRENCE EDMONDSTON, Esq., Surgeon, &c.

THE disease, of which the following is an instance, occurs so frequently, is so very distressing, and so often fatal, that any suggestion of alleviation or cure will not be hastily overlooked.

While residing last summer in Zetland, I was applied to for medical advice by a woman, a native of that country. The history of her case was very sensibly and perspicuously told, and formed a well-marked description of the usual commencement and progress of scrofulous inflammation round the knee-joint — a disease so well known, that I shall omit the repetition of its symptoms, contenting myself with simply describing the situation in which I found the patient affected with it in this individual case.

The woman was about thirty years of age. The complaint

had existed about three years; and she had the scrofulous constitution strongly and unequivocally marked. Several of the glands in the axilla and neck had been repeatedly swelled, and some ulcerated at former periods of her life; and a phthisical tendency was very apparent. On examining the knee, its whole fore part and sides, extending considerably above and below the joint, were almost one foul scrofulous ulcer, discharging matter highly offensive and corrosive. Ulceration was rapidly spreading; the patient was quite lame; could hardly move the limb but with intense pain; and had become greatly emaciated. The symptomatic fever was distressing; debility, rigors, and partial and nightly perspirations, were excessive; and, altogether, the poor woman seemed labouring under a disease which might very speedily be fatal.

She was, moreover, pregnant; and repeated abortions had essentially contributed to undermine the vigour of her constitution.

Under these circumstances, I could hardly expect of any treatment more than palliation, and enabling her to carry the *fœtus* to the full time.

One chief object of attention was, of course, to maintain her general health, as far as was to be effected while the radical cause of her suffering remained; and for accomplishing this object, all the usual means, chiefly, however, dietetic, were resorted to. Occasionally, some common tonic medicine was exhibited; and the regular and healthy action of the bowels was endeavoured to be secured. Blisters, caustic, sea-water bathing, stimulant lotions, poultices, emollient and anodyne, had all, before I saw her, been employed perseveringly without any effect—often with manifest disadvantage. The only local application, therefore, I directed was plain ointment, composed of lard, olive oil, and as much yellow wax as could give it the necessary consistence. This dressing was renewed once a day; and, occasionally, cold-saturnine fomentations to the sound parts of the limb were employed, especially when it happened to appear a little oedematous. The patient, under this treatment, felt and expressed herself easier; the ulceration appeared more healthy, but still its disposition to spread was hardly arrested; and the pain and stiffness on attempting to move the joint were little diminished. I then recommended her to have the limb cupped; but she objected from the dread of extending the ulcerated surface, as the skin in the neighbourhood of the seat of the disease seemed in so irritable a state, that a scratch sufficed to become a sore.

From excessive suffering, she was, however, willing to try any thing that promised a shadow of relief; and, according she was cupped in the usual manner of the country.* In a few days the spreading of the ulceration seemed arrested, and repeating the operation once, sometimes twice a week, it was found that, from being checked, it became lessened, and that the diseased symptoms were in every respect abating; and to my surprise, in little more than a month after the commencement of the use of this remedy, the sores were almost completely healed up, the stiffness and pain and weakness greatly diminished, and the general health and spirits materially improved. I enjoined her to continue the practice; but lest the stopping of an evacuation to which, though morbid, the constitution had been so long accustomed, might produce metastasis to vital organs, I warned her to be on guard against symptoms which I explained to her might denote the occurrence of such repulsion, and to have recourse to prompt measures for its removal — but these precautions have fortunately been superfluous; and I have the satisfaction of knowing, that this woman has borne, at the full time, a healthy infant; her knee is quite healed up; little lameness or debility remain; and she now enjoys comparatively good health.

Edinburgh, 4th April, 1823.

* The operation is thus described by Dr. Copland in his inaugural dissertation on Rheumatism, published, in 1815, at Edinburgh: —

“ Quam partem volunt scarificare, hanc aquâ calidâ foveant. (The) medici partes agit, is cutem sexies aut septies novaculâ percutit leviter perstringit, et cornu arietinum modice recurvum, quod cucurbitulæ vice fungitur, apice perforato, et corio molli circumdactâ partem leviter resectam applicat. Tunc foramini labia admoveat, quantum fieri poterit, aëra inclusum exsugit. Quum cornu eximissit, corio torquendo, et in foramen linguâ protudendo aëris ingressus impetum prohibet. Postquam cornu partem scarificat arripit, deinde pannos ex aqua calida paulum exsiccatos circa im cornu superimponit, qui sanguinem ad partem provocent. Quum sanguinis semiplenum sit, cornu tum cutem relinquit et decem Eadem res iterum et iterum repetitur donec satis sanguinis mittatur.

VIII.

Case of Disease of the Intestinal Canal, removed by the Oleum Terebinthinæ. Communicated by WHITLOCK NICHOLL, M.D., &c., with the subjoined Letter to the EDITORS.*

J. L., three years of age, of a full robust habit, son of the writer of this paper, was attacked, on the 18th February, with fever, cough, and other symptoms, which generally denote the approach of measles; on the 27th the eruption appeared, and on the following day it became general. As the pyrexial symptoms were more severe than usual, and the cough extremely distressing, almost incessant, with quickness of breathing, recourse was had to leeches, a blister, and salines, with full doses of digitalis; the body was frequently sponged with warm water, and the bowels kept in a soluble state with neutral salts and other aperients. On the 1st of March, the fever began to subside, the cough became less frequent, the eruption assumed a paler hue, and on the following morning it had disappeared, scarcely a vestige of it remaining. He seemed to be going on well till the 5th, when he became extremely peevish and irritable, crying much without any apparent cause, yet he could not be prevailed on to refer to any part as the seat of pain; this, I think, arose from the dread he had of some medicine being administered to him, for, when asked whether he was in pain, he would always say, "I am better, I don't want any physic, please not to drench me." On applying the hand to the abdomen and making a little pressure, it evidently produced pain, and the abdomen felt in some measure tense and hard,

* The accompanying case is so accurately reported by the highly respectable Practitioner whose child is the subject of it, that it does not require any addition from me. It affords a striking instance of the efficacy of oleum terebinthinæ in removing a morbid condition of the intestinal canal, while it forcibly points out the futility of combating symptoms in any other way than by attacking the primary source and cause of them. The case has appeared to me to be both interesting and instructive, and I therefore submit it to your notice. The efficacy of the oil of turpentine in cases of this description cannot be too frequently enforced, and medical men cannot be too frequently reminded of the necessity of looking through symptoms to that disordered state upon which the symptoms depend; for, without the constant exercise of this necessary, yet very difficult, discipline of the mind, practice must be empirical, and success fortuitous.

Ludlow, April, 1823.

but it was extremely difficult to ascertain the degree of tension, from his excessive restlessness and irritability, he crying greatly and struggling to prevent the application of the hand to any other part of the body. Towards the evening of this day there was an accession of fever, with great thirst, and a frequent desire to expel the intestinal contents; sometimes the attempts were fruitless, at other times he discharged a small quantity of transparent mucus. Three grains of calomel and one of ipecacuanha were given him at night; several evacuations of a brownish fluid, void of smell, with mucus floating in them, took place before morning. — On the 6th the fever was much increased; pulse full and extremely quick, but from his restlessness and dislike to be touched it could not be counted. Tongue white, skin hot and dry, breathing short and expressive of pain. Ten leeches were applied to the abdomen, and immediately on their falling off he was put into a warm bath, and the bleeding was encouraged for several hours; a large blister was then applied. Throughout the day he had almost perpetual irritation of the rectum, calling to the nurse to hold him out every ten or fifteen minutes, passing each time a small portion of glairy mucus, sometimes mixed with a fluid resembling thin coffee grounds, void of feces or smell. Glysters, with and without laudanum, calomel, ipecacuanha and pulv. rhei, neutral salt and castor-oil, were administered alternately without any effect; during the night (which was restless beyond description, he crying almost incessantly, and constantly wanting to have a motion, yet passing nothing but mucus, and in greater quantity than he had before), he took the common saline mixture with barley water. — On the morning of the 7th, the fever being unabated, and accompanied with a hot, dry, and parched skin, he was again put into the warm bath, but it did not produce the least relaxation of the surface. The blister which had been applied last evening, not having risen another was put on. His tongue was now become brown with considerable thirst; his eyes had a peculiar brightness and the pupils were dilated, yet sensible to impressions, and he was frequently picking his nose, the irritation of the rectum still continuing, with repeated discharges of more or less mucus, apparently mixed merely with the barley water which he drank. Conceiving it might be kept up by the lodgment of some hardened feces, the purgatives were persevered in, together with injections of gruel and castor-oil; no fecal evacuation, however, followed, but considerable quantities of mucus, somewhat resembling calves-foot jelly broken and discoloured. He had a restless night, with slight delirium. — On the 8th, all symptoms remaining in full force

the warm bath was again had recourse to, but without relief. Not perceiving any good to arise from active purgatives, but being aware of the importance of keeping the intestinal canal freely open, and of endeavouring to remove the morbid condition of its mucous coat, I now gave the hyd. cum creta with pulv. ipecac. every four hours. He had another restless night, with delirium.—On the morning of the 9th, Dr. Nicholl was requested to see him, who, wishing to ascertain whether his little patient exerted his abdominal muscles at the time he was held out to have a motion (the inclination to which was still very frequent), directed an injection of gruel to be administered; a large and unusually solid stool came away almost immediately; this encouraged the further use of injections and mild purgatives till the 11th; no fæcal matter, however, followed, but very frequent discharges of a greater or less quantity of discoloured mucus, without smell. On this day, fever and other symptoms being unmitigated, he was again seen by the Physician, who recommended his being kept under the mild influence of laudanum, given in the form of the black drop, to take the liq. amm. acet. with pulv. ipecac. every four hours, Epsom salts, injections, and the warm bath occasionally; no relief appeared to be obtained from this plan.

On the 12th, his restlessness increased, the irritation of the rectum continued, his countenance became pallid and dejected, his pulse feeble, yet extremely quick, with other symptoms of debility; as night approached, delirium came on—in short, he was in that state which left little or no hope of his recovery. On the following day, at the suggestion of the same Physician, the ol. terebinthinæ, in the quantity of ten drops, in mucilag. acac. and aq. menth. sat., was given every four hours. After the second dose, the alvine discharges, though still containing mucus, began to be tinged with fæces, and within thirty-six hours, the evacuations, though thin, had assumed a healthy appearance and smell. From this time all pyrexial symptoms vanished, the irritation of the rectum subsided, he had quiet undisturbed sleep, and in three days (during which time the turpentine was continued) he had no complaint left excepting debility.

His diet, the whole time, consisted of barley water, milk and water, and arrow root.—It may be proper to remark, that for the last two years there had been a very defective secretion of bile, with torpid bowels, to remedy which, he had taken, at various times, a considerable quantity of the different preparations of mercury, together with the potass. sulphas. The same state of liver and bowels still remains.

Leominster, April 4th, 1823.

IX.

Case of Epilepsia supervening to Hemiplegia, in which the Tartar Emetic Ointment was successfully employed. By HARRY WILLIAM CARTER, M.D., F.R.S. Ed., Member of the Medico-Chirurgical Society, and Senior Physician to the Kent and Canterbury Hospital.

[In a Letter to Dr. COPLAND.]

AN individual case, particularly when it relates to a disease which has hitherto too often baffled the skill of the Physician, is useful, since, however defective the writer's views may appear both as to pathology and practice, they may, at least, attract the attention of the enlightened members of the Profession to an interesting subject, and may incite them to investigate, to verify, or to disprove the facts, and the conclusions which that case places before them. I therefore submit to you the following statement, in the hope that, if you will assign it a place in the REPOSITORY, it may elicit from others new and far more valuable communications upon the subject of epilepsy.

George Turner, ætatis thirty-five, soldier, was admitted an out-patient of the Kent and Canterbury Hospital, March 8th, 1822, with hemiplegia, affecting the left side, and epilepsy. The paralytic affection came on while he was serving with the army in Spain, and he attributed it to cold and damp. He was discharged as unfit for service, with a small pension, and has since lived very poorly. His first epileptic seizure occurred on Christmas eve, 1820, without any previous warning. From the above date, to the period of his becoming an out-patient of the hospital, he had experienced frequent attacks — sometimes every day, sometimes several times a day for a week together, sometimes at more distant intervals. His countenance was dull, his eyes were heavy and void of expression. His intellects appeared to have sustained a rude shock. He complained of drowsiness, loss of memory, and fullness of head, which had induced him to apply to a Surgeon to bleed him. The Surgeon, however, declined, on account of the patient's extreme debility. His pulse was frequent and feeble. His tongue was furred, and his bowels were constipated. Considering all the circumstances of the case, I judged it expedient to put the patient upon a tonic plan of treatment, not neglecting purgatives as often as were required. I was, however, compelled to interpose topical blood-letting, by means of leeches and cupping, and to apply

blisters. The former afforded temporary relief — the latter seemed to be of no service. At length, May 17th, a seton was made in his neck. About this time his bowels had become so exceedingly constipated, that common purgatives had no effect, and I prescribed pills, containing one drop of croton-oil, to be taken as often as might be necessary. This medicine answered extremely well for some time,* and the patient's general health certainly improved, but he never had above three weeks' respite from the fits. He was discharged September 27th. On the 28th October he again applied to me, having experienced frequent and severe attacks since he left the hospital. As an act of charity, he was again entered upon the books. In addition to his former symptoms, he now was troubled with cough, and considerable oppression referred to the *scrobiculus cordis*. Chiefly, I confess, with the view of relieving these symptoms, I directed him to use the tartar emetic ointment. He commenced its employment, October 31st. Its specific effects quickly showed themselves, and, when I saw the man again, November 7th, the eruption was very great and painful. Sloughing of the integuments took place, and the discharge became very profuse. To allay the pain, fomentations and poultices were now resorted to, and a piece of linen, spread with the ointment, was laid over the sore. On the 22d, the eruption had extended over the whole of the trunk. This caused excessive irritation for several days, but gradually died away. *There had been no return of the fits since the 31st October.*

December 6th. — He begged to be allowed to discontinue the use of the ointment for a time, on account of the intolerable burning pain which it occasioned. It is to be observed, that the pills of croton oil had entirely lost their power, and he was therefore directed to take *elaterii*, gr. $\frac{1}{4}$, *pro re nata*. Leeches also were again applied to his temples, as he complained of shooting pains in his head.

20th. — No return of epileptic attacks. The ointment had

* Upon referring to my notes, I find that, on the 5th May, he took two pills, each containing one drop of the oil. He was purged seven or eight times, and vomited a quantity of mucus, from which he experienced great relief. On the 8th, he took one pill, which procured seven bilious evacuations. On the 10th, his confidence in the medicine induced him to take another dose, which operated to the same extent as the former ones. He was now much better. Countenance improved. No pain of head. Tongue clean. Pulse natural. Appetite very good. On the 17th, however, he had a fit. He continued to take half a drop of the oil every other day for several months. Why it was discontinued will be seen in the sequel.

been resumed, the sore having shown a disposition to heal, and there was once more a profuse discharge. The pain, however, was so intense, that the remedy was again of necessity suspended. The elaterium pill, taken almost daily, procured one plentiful evacuation.

Throughout the month of January the patient remained free from attacks. The discharge had been kept up by savine ointment.

March 24th.—The sore was nearly healed. There had been no recurrence of epilepsy, but unpleasant sensations about the head had returned. He was directed to rub in the ointment on the left arm, for he could not bear the idea of its being again applied to the chest; and, moreover, I hoped that the paralytic affection of the arm might be relieved by the stimulus of the ointment.*

At the present date, April 14th, the subject of the above case remains free from epilepsy; and, from the foregoing narrative, it seems clear that, if any remedy have exerted an influence over Turner's complaint, that remedy has been the tartar emetic ointment; and since, previously to his commencing its use, he never escaped a fit for more than three weeks together, whereas from the period when he first began to employ it, down to the present date, *i. e.* for upwards of five months, he has been exempt even from a slight attack, it seems fair to conclude, that the remedy has at least suspended the disease.

Should any one be disposed to imagine, that the means more commonly in use for producing and keeping up a discharge would have proved equally beneficial in the case before us, I beg leave to remind him, that neither blisters nor seton were of the least avail.

I am endeavouring to extend my knowledge of the effects of the tartar emetic ointment in epilepsy, as well as in some other diseases, and I hope to be able, in a short time, to afford you some further details respecting it.

Canterbury, April 14th, 1823.

* The patient's wife assured me, that since the use of the ointment he had been able to cut his food, which he could never do before since his first attack, and that the paralytic arm was much warmer. March 29th, there was a profuse discharge from the arm, and the whole limb was hot and inflamed. The fingers only were numbed. The man said he had suffered a great deal in his life, but never anything equal to the *burning* of the ointment.

This case reminds me of one recorded in the *REPOSITORY* for February last, article "upon the Progress of Medical Science." A child, subject to epileptic fits, was accidentally burnt on the chest, and epilepsy was cured.

PART II.

ANALYTICAL REVIEW.

I.

1. *Observations on Sulphureous Fumigations, as a powerful Remedy in Rheumatism and Diseases of the Skin.* By WILLIAM WALLACE, M.R.I.A., &c. 8vo. Pp. 92. Dublin, 1820.
2. *Observations (from Experience) on the Aid obtained in various Diseases (particularly those incidental to Tropical Climates), by the External Application of the Nitro-Muriatic Acid, in a Bath: with several Cases wherein it has been used by the Author with great Utility; to which is added, the most approved Mode of mixing the Acids and preparing the Bath.* By PHINEAS COYNE, M.R.C.L., and late of the Hon. E. I. C.'s Service. 8vo. Pp. 124. London, 1822.
3. *Researches respecting the Medical Powers of Chlorine, particularly in Diseases of the Liver; with an Account of a new Mode of applying this Agent, by which its Influence on the System can be secured.* By WILLIAM WALLACE, M.R.I.A., &c. 8vo. Pp. 162. London, 1822.

WITH reference to the works whose titles are prefixed to it, our present article must naturally resolve itself into three sections, on the salutary influence of sulphureous fumigation, the nitro-muriatic acid bath, and chlorine in a gaseous form, on certain conditions of disease.

1. *Sulphureous Fumigation.*—Mr. Wallace, in the tract before us, relates a succinct history of the origin of this invention, of its progress on the continent, and of the investigations, together with their results, to which it has been submitted, by medical inquirers. To this he adds some general observations and reflections derived from his own experience of the remedy, in hospital and private practice.

We must decline, on this occasion, any attempt at retracing the discovery and progressive improvements of the art of treating disease by fumigation. Many of our readers

will, perhaps, be satisfied with knowing that Hippocrates more than 2000 years ago, employed it with freedom and frequency; that Physicians, in after ages, prescribed it under a diversity of forms, and for the mitigation or removal of various maladies; and that Dr. Galés, of Paris, for having revived and "perfected" the method of applying sulphureous fumigation to the cure of rheumatic, arthritic, cutaneous, and other affections, obtained, in 1815, an annual pension of 600 francs from the government of his country.

In regard to the comparative experiments officially instituted in France for the purpose of determining the true value of Dr. Galés's discoveries, it may be sufficient for us to state that his practical deductions were fully confirmed, after impartial and diversified probation, by the distinguished individuals* appointed by authority to examine them. Mr. W translates and gives them a place in his pages, to which we refer.

No sooner was the use of sulphureous fumigation established in France, than Dr. Decarro, the indefatigable promoter of vaccination in the Austrian metropolis, entered with his characteristic zeal, on the application of this powerful remedy to the benefit of his countrymen. His expectations from it were fully realized; and, in a few months, his example and advice were so generally adopted, that no fewer than forty-eight fumigating machines were constructed in the principal German and Italian towns. We cannot go into detail of his beneficent operations, and shall therefore conclude this branch of our subject with one of the twenty-six cases of practical evidence by which Mr. W. finds himself authorized to observe, "that, although its (sulphureous fumigation) salutary influence is in general remarkably rapid, on other occasions long perseverance will be required; and that frequently the only advantage that can be derived from its application, is as an assistant to other remedies, or to prepare the system for their influence."

Case from Dr. Galés.—A. B., a sailor, aged fifty, contracted a syphilitic affection, which resisted venesection, mercurial frictions, sudorific drinks, and other appropriate remedies. The patient attributed this want of success to the negligent manner in which he attended to the regimen prescribed, and to excessive drinking. In a year, his shoulders, loins, and other parts of his body, became covered with humid dartres, attended with a thick whitish discharge. H.

* First Report, signed by Pinel, Dubois, Tartra, Esparon, and Bouillon-la-Grange; second, by Percy, Leroux, Richerand, and Dupuytren; and the third, by Hallé, Dubois, Pinel, and Dupuytren.

was treated, without success, during two years, by a Dutch Physician; but still the disease gained ground. Discouraged by the inefficacy of the remedies employed, by the inutility of an issue in the right arm and of a seton in the neck, the patient confined himself to sudorific drinks and domestic baths: Nevertheless, the dartres made frightful progress: they had already affected all the external surface of the head, and caused such ravages, that the left eye was soon entirely lost, and the right strongly threatened.

Such was the deplorable state of this man when he presented himself to Dr. Galés, who, not doubting but that inveterate ill-treated syphilis was the principal cause, or a complication of the darts discharge, immediately submitted him to sulphureous fumigations, to prepare him for the treatment the syphilitic disease required. After the first fumigations, derangement of the digestive organs, with feebleness, general lassitude, and loss of appetite, occurred, but promptly yielded to evacuation. After this, the fumigations were not interrupted; and the dartres on the shoulders, back, and loins, were removed after the twentieth. Those on the head and arms resisted for a longer time; but, after the fortieth, the right eye was put out of all danger, and the skin insensibly resumed its natural state. Thus, says Dr. G., in the space of two months, by the assistance of seventy-five sulphureous fumigations and of depurative syrup, with the addition of muriate of mercury in the dose of sixteen grains to two pints of the syrup (in all, eight pounds of syrup and sixty-four grains of the muriate), syphilitic dartres entirely disappeared, which for seven years had resisted all modes of treatment.

Note by Dr. Montégre.— I have examined this man since his cure, and am able to compare his present state with that in which he was two months and a half ago. M. Galés, before submitting him to treatment, caused a representation of his horrible appearance to be drawn. It is very easy to observe, in the enormous and numerous cicatrices with which his body is covered, the ravages the disease had produced. I never saw an example of so remarkable a cure, and this is the motive which induces me to have frequent recourse to sulphureous fumigations, by which results are obtained, in some sort miraculous, precisely in the cases in which all other remedies almost constantly fail.

Mr. W., in a plain engraving, gives a distinct sketch of the fumigating apparatus constructed under his own directions; and concludes his essay with a train of judicious observations on the necessity of exercising much discrimination in selecting the cases for treatment by sulphureous fumi-

gation, together with rules for rightly conducting the process. However valuable of themselves, it is obvious we cannot afford space for these instructions: the reader will find at the 70th and subsequent pages of the work.

We are led, in fine, to agree with our author in admitting that sulphureous fumigations may be employed in all chronic diseases of the surface and extremities, which either unconnected with internal disorder, or which, connected, are the cause of it, and not the effect. They may also be frequently used in cases of local disease which have been determined by, and are still connected with internal derangement, provided great attention be paid to the medical treatment of the internal affection, in conjunction with employment of fumigation.

II. *Nitro-muriatic Acid Bath*.—Mr. Coyne, in his treatise which by the by is a popular one, undertakes to satisfy his readers of the truth of three things, viz. that Dr. Scott was the first to discover, and the first to prescribe the use of the muriatic acid in a bath; that attempts have been made to throw the remedy into disrepute, without a fair trial of its efficacy; and that he himself has employed it with advantage in different diseases.

For three reasons, we shall not dwell on the two first of these topics:—1st, Because we take it for granted that our readers do believe Dr. Scott to have been the original discoverer of the nitro-muriatic acid bath; 2d, because, at times, we prefer inductive doctrine to polemical discussion; and, 3d, because we do not very much admire Mr. Coyne's "medical logic," although it be exercised in support of a proposition, and in defence of an accomplished and generous man.

Mr. C. has exposed himself, we think, to criticism by having omitted every thing like a discrimination of symptoms by which he regards employment of the nitro-muriatic acid bath as being indicated. His rules, more than his facts, are wordy and perplexed: indeed, there is a mystery about the first half of his book, which suggests the idea of a suppression and a reprint. The page which follows the 55th is marked 56-88; and, from 89 to the end, the volume is in a quite different style of typography.

According to Mr. C., it is still a desideratum to ascertain what proportion of nitric acid is requisite to saturate a given quantity of muriatic acid, without addition. He uses *three* parts of colourless muriatic acid to one part of nitric. Believing chlorine to be the active principle of muriatic acid, we should expect decisive results from a

muriatic acid bath ; but this is an opinion merely ; we have never reduced it to experiment. Dr. James Johnson,* our best writer on hepatic diseases, employs equal parts of the acids. We prefer, and shall therefore transcribe his directions for preparing the bath.

“ Into a glass vessel capable of holding a pint or more of fluid, put eight ounces of water, and then pour in four ounces of nitric acid and four of muriatic. One ounce and a half of this mixture, to a gallon of warm water, will form a bath of medium strength. The proportion may be increased to two ounces, or diminished to half an ounce of the solution to the gallon of water, according to the age, strength, delicacy, or other peculiarity of the patient. A bath of two gallons and a half is generally sufficient for the legs and feet. A narrow and deep wooden bucket is best ; such as will bring the water well up to the knees, without requiring more than eight or ten quarts of liquid. The feet and legs of the patient ought to be immersed in this bath, at a comfortable warm temperature, say 96 degrees, and kept there for twenty minutes or half an hour, just before going to bed. This may be done every night, or every second night, and the same bath will remain good for three or four nights. It ought to be kept in a wooden bucket, and a fourth part or so warmed up, every time it is used, in a well-glazed earthen vessel, and added to the rest, which will make the whole of a sufficiently warm temperature : or a fourth part of the bath may be thrown away, and a fourth part of fresh hot water added, and an ounce of the nitro-muriatic solution, which will obviate the possibility of any decomposition taking place by glazed vessels. — As sponging the body with the N. M. water has nearly the same effects as the foot-bath, a small quantity may, at any time, be easily prepared, by adding two drams of the nitro-muriatic solution to each pint of warm water in a common wash-hand basin. By means of a large sponge, the thighs, legs, stomach, chest, or arms, may be wetted with this mixture for ten or fifteen minutes daily ; or the above-mentioned parts may be sponged alternately.”

We are now arrived at the history of Mr. Coyne's own experience of the remedy, and find seventeen cases detailed by him in confirmation of its beneficial agency in scrofula — hydrocephalus — herpes — consumption — epilepsy — disease characterized by palpitations of the heart, “ raw feel” of the bowels, vertigo, tremors, nervousness — atrophy — chronic hepatitis — anasarca — leucorrhœa and menstrual obstruction

* A Treatise on Derangements of the Liver, &c. &c. By James Johnson, M.D., &c. &c. London, 1820. Pp. 111, 113.

—ulcer after typhus fever — infantile diarrhoea — complication of hepatic and pulmonary disorder — inveterate ulcer of the nates — foul ulcer of the throat, with scurfy skin and nodes on the shins — dropsy and ruined constitution from dissolute habits — and torpor of the liver, with atrophy of the left limb, and general sinking. These cases are written in a loose and inelegant manner; and, from the proportion of other active medicines exhibited in conjunction with the nitro-muriatic acid bath, are sure of being regarded as inconclusive evidence of the proposition in support of which they are advanced. With the same internal remedies, it may be said, and frequent bathing in warm water, equally beneficial results may at any time be produced. Be that as it may, however, we on our own part are willing to receive them as testimony of the virtues of the nitro-muriatic acid bath; and, at the same time, beg to offer Mr. C. our thanks for having done his best to honour the memory of a meritorious Physician, and to prevent the premature rejection of a convenient and energetic remedy.

We transcribe Mr. C.'s fourteenth case, in a condensed form, because it possesses a more decisive character than any of the rest, and also affords more direct evidence in favour of the bath. It was treated in Guy's Hospital, with the concurrence of Sir Astley Cooper, who is reported to have said, before his pupils, to our author, "if you cure this poor girl, you deserve a *crown*, and not a *silver crown*."

Case. — A young woman, aged twenty-two years, had been twenty-seven months in the hospital; but no record of her case was preserved. Mr. C. learned from herself, that about three years before she had a small ulcer near the anus, which was extremely painful and disposed to spread. At this time, the whole of the nates and part of the thighs were covered with a "*horribly fetid foul ulcer*," the edges of which were hard and ragged, parts being turned outwards, others inwards. The surface was unequal, and the different excavations occasionally discharged a dark-coloured ichorous matter, which produced excoriation and intolerable pain. The ulcers sometimes bled, and had a burning feel: the sore had great appearance of cancer in an advanced stage. The alvine dejections were in all respects variable, but never natural. The woman had an obtuse pain in the region of the liver. Her pulse was small, frequent, feeble; countenance pale and dejected; menstruation two years suppressed; skin parched; she experienced frequent colliquative sweats; was emaciated; had hectic fever.

At first she used the bath twice daily, and only ten or fifteen minutes each time. She took common aperients, and

applied the bath much diluted to her sores. In a week the opening medicine was discontinued, as the bowels were too much relaxed, and their discharges purulent. She was put on milk-diet; and, in two days, resumed the bath. Under its use, all her symptoms improved, and the ulcer began to granulate. In five weeks her gums became spongy, and the salivary secretion increased. The bath was omitted for five days, and healthy bile was perceived in the evacuations. She bathed daily for nine or ten weeks longer; got fat and healthy; her bowels came to be natural; menstruation returned; and the ulcer continued to heal. Being now discharged from the hospital, she was soon in so good health as to get into service.

We now resign Mr. C. and his book to the doom of public opinion: if he is a candidate for professional regard, he will obtain it to a just extent; if popular notice be his aim, let him look to the people for an acknowledgment of his usefulness and the right appreciation of his merits.

III. *Chlorine*. — Our third section brings us to Mr. Wallace's researches on the medicinal powers of chlorine in a gaseous form. Having adopted the opinion of Dr. Scott, that the active medical agent in the nitro-muriatic acid was in all probability chlorine; and having learned, from experience, that remedies applied to the surface of the body, in the form of gas or vapour, were more active than when used in any other form, particularly if the body is, at the same time, excited by exposure to a high temperature; he was led to try the influence of chlorine gas in hepatic diseases, assisted in its operation by artificial heat.

Mr. W. arranges his volume into three parts, containing— observations relative to the application of medical agents to the mucous and cutaneous surfaces; cases, with observations, submitted to the influence of chlorine; and the general medical agency of chlorine, and the mode of employing it. In our analysis, we propose retracing his steps, without confining ourselves to the formality of his distinctions.

Having stated his notions on the doctrine of absorption, and defined the analogies which exist between the cutaneous and mucous surfaces, our author proceeds to sketch a history of the mode of treating disease by medicated frictions, from the most ancient down to modern times. This is followed by a selection of facts — the result of accurate experiment — by which the power of acting on the system by medicated frictions is satisfactorily ascertained, and the beneficial influence of such frictions fully established. Having admitted the truth of these circumstances, Mr. W. was led to take up the idea, that there is every reason to expect more remarkable

consequences from the application of the same agents in the gaseous form, and while the skin is in that state of excitement which necessarily arises from its exposure to a high temperature. His next step was to try the theory by experiment: he did so, and obtained the most satisfactory results.

As we advance, we find Mr. W. remarking, that the diseases which depend more or less on derangement of the biliary system do exceed all others in number; that our knowledge of their nature and treatment is still very imperfect; and that, by consequence, the discovery of a remedy (e. g. gaseous chlorine), capable of affording considerable assistance in a vast proportion of them, must be an important acquisition to the science. The beneficial effects of this remedy are exemplified in a series of cases which the author arranges into three classes — those in which the liver was the organ primitively and principally affected; those in which the principal distress was not referred to the liver, although there was every reason to suppose that this organ was the original seat of the disease; and those in which the liver was the principal seat of the disease, but in which its disease had been preceded by a morbid state of other organs. We present these cases to our readers in a condensed form.

A, the patient, a lad aged nineteen, was jaundiced from hepatic obstruction. *First day*, he got purgatives in the evening. *Second*, had two scanty, whitish, sour, liquid stools; fumigated with chlorine, in a temperature of 110°. *Third*, alvine confinement, free perspiration, pricking of the skin: purgatives and chlorine repeated. *Fourth*, large bilious evacuations from the bowels, urine dark and muddy: chlorine continued. *Fifth*, bilious dejections, general improvement: the chlorine. *Sixth*, sore mouth, bowels obstructed, minute fluid papulæ on the surface, increase of appetite, jaundice waning, itching gone, tongue cleaner, abdomen less tender: chlorine as before. *Seventh*, free purgation, soreness of the gums augmented, eruption stationary: chlorine again. *Eighth and ninth*, icterous symptoms nearly all removed, spontaneous action of the bowels, patient every way better. *Tenth and eleventh*, convalescence advancing. *Twelfth*, left the hospital. At the end of five weeks this lad waited on Mr. W., who found him perfectly cured, and having every appearance of excellent health.

Mr. Wallace was greatly pleased with the issue of this case: it fully satisfied him, as far as one fact could, of the specific influence of chlorine gas on the liver, and of the advantages which might be expected from its employment. Dr. Scott, however, and Mr. Charles Bell, and Mr. Coyne, and Dr. James Johnson, with most of our inter-

tropical Practitioners, would probably have induced similar effects with evacuants, mercurials, and the nitro-muriatic acid bath. We ourselves, indeed, have seen as intense forms of jaundice yield to emetics and purgation; to purgatives and venesection; to diaphoretics, mercurials, and purgatives conjoined, each of the methods being assisted by warm bathing. Let us not be understood, however, as wishing to derogate from the remedial virtues of chlorine: in this instance, it enabled Mr. W. to effect the cure of a disease which had baffled the resources of other eminent men.

We pass over the next case, which is one of chronic enlargement of the liver, with its usual concomitants, in a female. It yielded to the chlorine gas, a course of purgatives, and the use of *leontodon taraxacon*, "from which," said the late Dr. Pemberton,* "I have seen the most decided advantage, both in incipient scirrhus of the liver, and also in several chronic derangements of the stomach."

Mr. W. afterwards had some analogous cases, whose termination was equally fortunate. He refers the immediate cause of this favourable result "partly to the specific influence of chlorine on the actions of the liver, and partly to the local irritation produced in the skin covering this organ."

"No doubt," he goes on to say, p. 38, "exists in my mind of the power of chlorine to exert a specific influence on the secretions of the liver. We know, from general experience, that one of the most efficacious ways of subduing a tendency to disorganization, or even an actual alteration in structure, of a glandular part, is by increasing and modifying its secretory actions. Practitioners, in my opinion, are too neglectful of employing a continued irritation of the skin, or a discharge from this organ, for the relief of deeply seated viscera, when affected by chronic disease."

C is a case of "gall-stones," with tumefaction of the liver, icterus, dyspepsy, and great irregularity of the bowels. At the time of the book's being published, the symptoms were improving under the use of bitter aperients, and "the general application of chlorine, in conjunction with watery vapour, at the temperature of 98°, for twenty minutes daily, and a similar topical application to the region of the liver, for ten minutes every second day."

D is an example of a plethoric state of the liver, with a strong tendency to chronic inflammation and enlargement. It was immediately relieved by an increased secretion of bile induced by the chlorine; but the medicine, in ten days, made

* A Practical Treatise on various Diseases of the Abdominal Viscera. By C. R. Pemberton, M.D., &c. London, 1814. P. 42.
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the patient's mouth and throat very sore, and caused a thick eruption over his person. It was then discontinued, and a course of nitrous acid, with laxatives, in *some* weeks put the gentleman in better health than he had enjoyed for several years.

E. Some, but very sensible practical remarks on the nature and manifestations of hepatic disease introduce us to this case, which is one of functional derangement of the heart, originally (three years before) excited and kept up by a disordered action of the liver and other digestive organs. The symptoms had nothing uncommon in them. Purgatives and chlorine, in conjunction with aqueous vapour at 110°, in six weeks restored the patient to the full enjoyment of health.

F is a case of "incipient general dropsy, which had its cause in a wrong action of the liver." The patient was a female, twenty-eight years old, and unmarried: her chief symptoms were suppressed menstruation; cedematous swelling of the eyelids, abdomen, and extremities; pain in the sides, breathlessness, cough, and confinement of the bowels. The chlorine determined a remarkable increase of all the secretions (*excretions?*), particularly those of the kidneys, skin, and alimentary canal; and, in five weeks, the woman's health was re-established.

The comparative proportions of this person's drink and urine are exhibited in the following table:—

Days.	Drink.	Urine.	Days.	Drink.	Urine.	Days.	Drink.	Urine.	Days.	Drink.	Urine.
1	8 lbs	3 lbs	8	4 lbs	7 lbs	15	3 lbs	2 lbs	22	4 lbs	5 lbs
2	7½	3½	9	4	5	16	3	2	23	4	7
3	4	3	10	4	5	17	3	2	24	4	8
4	4	8	11	4	5	18	4	3½	25	5	9
5	4	6	12	4	4	19	4	5	26	4	8
6	4	7	13	6	5	20	3	5	27	4	7
7	4	8	14	4	3	21	4	6	28	3	6

While we fully concede the strong evidence of this case in favour of the anti-hydriopical efficacy of chlorine, we would take permission to mention merely, that Mr. W. will find in the records of medical science * many instances of dropsy from suppressed menstruation being cured by purgatives and

* Were not we apprehensive of incurring the displeasure of certain modern discoverers, we might quote a remarkable case of this kind of dropsy cured by sanguineous depletion. It was treated by the celebrated Dr. J. P. Frank, at the time Professor of Clinical Medicine in the University of Pavia, and will be found in Dr. Grapengiesser's dissertation on Plethoric Dropsy, published at Göttingen in 1795.

repeated venesection. Ever since the days of Aretæus, indeed, that man must be a novice in the Profession, or a theorist, who would not treat all such cases of dropsy with free depletion, both alvine and sanguineous. Additionally to this efficient practice of our forefathers, we have now to thank Mr. Wallace for another of equal energy — that of chlorine in a gaseous form.

G is a case of ecthymatous eruption. The patient received chlorine, both generally and topically, at 115°, every day for four weeks, and, with the assistance of aperients, was perfectly cured. Mr. W. promises, on a future occasion, to consider the general principles which ought to regulate our treatment of cutaneous diseases: we anticipate instruction from his labours, and shall find pleasure in congratulating him on his success.

H. In this are enumerated the circumstances of a true hepatic affection consequent on injury of the head. It is preceded and followed by a few very judicious, though not original, remarks on the power of external injury to produce disease in distant internal parts. By a three weeks' course of the chlorine gas the patient was restored to health.

I. This is designed to exemplify a morbid state of the liver, preceded by rheumatism, and probably caused by it. The symptoms were distinctly marked: the remedy consisted of alvine evacnants and chlorine, in conjunction with aqueous vapour, topically and generally applied till the constitution became affected, and irritation was excited in the regions of the liver. The patient's recovery was complete.

Having detailed his illustrations of the good effects of chlorine in hepatic lesions, our author proceeds to explain its mode of action on the system. With the zeal of a true experimenter, he submitted his own person, and, at their desire, some of his pupils, to its influence, before he attempted to ascertain its salutary powers in morbid states of the constitution. These trials enabled him to specify the following results.

Chlorine applied, in a gaseous form, to the surface of the living body, produces determinate effects on the cutaneous and mucous surfaces, on the respiratory and sanguiferous organs, and on the brain and nerves. It excites a particular stinging sensation in the skin, a copious increase of perspiration, and a general papular eruption, which Mr. W. denominates the "chlorine rash." It occurs on all parts of the body, but more particularly on the back, loins, breast, abdomen, and arms. Its aspect is aptly compared to that which those minute eminences, to which the roughness of the cutis

anserina is owing, would have, in case of their being injected or in a state of active inflammation.

When the system is impregnated with the gas of chlorine, a change is thereby produced in the quantity and quality of all the secretions of the mucous membranes and the glands whose ducts terminate in their surfaces, more especially of those of the biliary and salivary glands, and of the urinary and genital organs. There is also an exaltation of their sensibility, testified by soreness of the mouth, fauces, and œsophagus; and their structure sustains an alteration, which is known by increased vascularity and minute ulcerations of the mouth and throat.

Chlorine accelerates the actions of respiration and circulation, during exposure to its influence. Mr. W. is disposed to believe that both these functions are permanently exalted by its action, from having observed such a state to exist from one application of the medicine to the other, and this whether there was or was not any cutaneous irritation.

Chlorine has the power of tranquillizing, and, at the same time, exciting the nervous system. Whether this be owing to its immediate operation on the brain and nerves, or to its action on these parts through the medium of the liver, Mr. W. does not pretend to say. Perhaps its influence extends to the sentient organs through the media of absorption and circulation: the nerves themselves cease to be sensible, cease to live, when their supply of blood is intercepted. Our author has seen some persons, who had been in a most languid and desponding state, rendered almost immediately tranquil and active by one application of chlorine. On some very rare occasions, however, he has known it to increase the nervousness of individuals, and, in consequence, was obliged to intermit its employment.

Besides these *sensible*, Mr. W. has observed what he calls *insensible* effects of chlorine. He ascribes to it the power of modifying, in a gradual manner, the tone of the organic fibre. Much of its value in chronic disease, he thinks, is owing to an action which, although most gradual in its operation, finally accomplishes a general and complete change in the organization. The alteration which takes place in the secretions is a convincing proof that chlorine, when applied to the skin, enters the circulation. Thus the urine loses, in a great measure, its power of reddening paper stained with litmus, and acquires the property of discharging, in a greater or less degree, its natural colour. An agent, Mr. W. goes on to say, which has so completely the power of exciting the cutaneous organ in so general, so permanent, and so salutary a manner,

must necessarily afford very considerable assistance in the treatment of those innumerable diseases which either depend on, or are attended by, a languid or atonic state of this important covering. Its powers also as a cutaneous irritant, when applied in a pure state, will be found in many cases much superior to that of a blister. This, perhaps, is owing to its having the property of affecting the structure of the teguments more deeply and in a more equable manner than can be obtained by the application of cantharides. Chlorine, moreover, deserves a trial in all cachectic states of the system, and many chronic inflammations of the fibrous and mucous tissues. It will be found useful, more or less, in every arrangement of the biliary system. In some, it can be employed as an adjuvant only, and must be used with caution: in others, it will of itself be sufficient to accomplish a cure, when all the other resources of medicine have failed. In all cases, indeed, of hepatic disease which consist in a torpid or wrong action of the secretory powers of the biliary organ, but which are not attended by active inflammation, it will be found an invaluable remedy, and may be boldly used with well-grounded expectations of success.

Having described the extensive medical agency of chlorine, Mr. W. goes on to account for the cause of its salutary influence on the liver, and to define the forms of hepatic disease in which it is most beneficial. Some remarks on its power of benefiting other affections, in consequence of its influence on the liver, are succinctly added. This brings us to his observations on the utility of chlorine in hypochondriasis, headaches, numbings, coldness of the limbs, torpidity of the bowels, deficient or suppressed menstruation, hysteria, chlorosis, chorea, epilepsy, dyspeptic complaints, organic lesions of the liver, and even in acute inflammation of that organ.

From this essay to determine the uses of chlorine as a therapeutic agent, our author proceeds to describe his mode of applying it, together with the process of obtaining it in a gaseous form. This part of his book, like every other part of it, is characterized by much candour and perspicuity: we refer to it all those of our professional brethren who may feel inclined to repeat his experiments, and we earnestly wish them equal success.

Several of the next pages contain Mr. W.'s remarks on the resemblance between the action of chlorine and that of the nitro-muriatic acid bath. The only difference between them, he says, consists in the *certainly* with which gaseous chlorine acts, compared with the very *uncertain* effects which arise from the acid: the latter, however, may be exhibited to children, and when the former cannot be procured. "Indeed," he sub-

joins, "Unless I am greatly mistaken, chlorine gas will from henceforth be much employed, in conjunction with heated air or gaseous vapour, merely as a cutaneous stimulant; and, for this purpose, it will be found superior, on several occasions, to many others, even to sulphureous fumigation."

To the preceding are subjoined some observations on chlorine as a substitute for mercury, and on the similarity of their action on the system. The author concludes his volume with this very judicious and candid statement;—that he does not come forward with chlorine as a specific in hepatic affections, but merely recommends a trial of it on general principles; and asserts that, if administered on such principles, it will be found a most valuable agent in the practice of medicine.

We take leave of Mr. Wallace's book with entire approbation of the industry and ability which it displays. We consider it to be a good specimen of inductive therapeutics, and to be eminently distinguished by the unassuming manner in which he has promulgated his sentiments.

II.

Practical Observations on the Treatment and Cure of several Varieties of Pulmonary Consumption; and on the Effects of the Vapour of Boiling Tar in that Disease. By Sir ALEXANDER CRICHTON, M.D., F.R.S., Physician in Ordinary to their Imperial Majesties the Emperor and Dowager Empress of Russia, and to his Royal Highness the Duke of Cambridge, Knight Grand Cross of the Second Order of St. Vladimir, Knight of the Red Eagle of Prussia of the Second Class, &c. Pp. xxxvi.—261. London, 1823.

THIS work contains some judicious observations, delivered, however, with a total disregard of method and manner. We proceed to present our readers with an analysis of the eleven unconnected chapters into which the book is divided—we cannot say arranged, for the author appears to have adopted no arrangement.

Sir Alexander commences a long preface with some remarks on the incongruous opinions entertained respecting the treatment and cure of pulmonary consumption. He here takes occasion to notice the contradictory indications which the prescriptions of many present in this disease, and the opposing opinions that are entertained as to its pathology. He next takes a view of the history of the use of vapours in pulmonary disease, and advocates his own claim to the intro-

duction of tar-vapour in the treatment of consumption. He afterwards argues in favour of the benefit which may be derived from its judicious application; chiefly however, from the account given him by Hufeland and Neumann of its exhibition at the Charité, a large hospital in Berlin.

Chapter I. commences with an appeal to professional men concerning the possibility of curing some of the worst varieties of consumption. The author here adduces the opinion of Laennec, who supposes, from pathological evidence, "that tubercles in the lungs are not, in every case, a necessary and inevitable cause of death, and that a cure may take place in two different ways, after the formation of an ulcerous excavation: *first*, by the cavity becoming invested by a new membrane; and, *secondly*, by the obliteration of the excavation, by means of a cicatrix, more or less complete, consisting of cellular, fibrous, or cartilaginous substance." On this interesting subject our author does not long continue to speculate, but immediately inveighs against Dr. Lazzaretto, who, a year after the appearance of Sir Alexander's first work on tar-vapour, published on the same subject, and with the same views, without noticing the earlier production. The shonest pamphlet has met its reward: so die all such reviewers will not fail to add the response, although they may not deign to be the executioners. But, to be serious, we believe that neither the Knight nor the uncandid Doctor have great reason to boast either of the actual originality of the practice or of the cures which it really performs. We do not, however, entirely deny originality to our author, for we cannot say that the praises bestowed on the vapours of resin, of turpentine, and, indeed, of the various terebinthines, as recorded in the writings of Muzell, Lentin, and other authors, indicate the employment of boiling tar, although we cannot see the marked difference in the vapours which arise from substances containing the same volatile constituents.

The author next offers some observations on the mode of exhibiting the tar-vapour, finds fault with the manner in which it has been used in this country, and makes some unconnected remarks on the benefit which it is capable of rendering. We expected to have found at this place, especially after reprobating the manner and circumstances in which the vapour has been employed, something like a lucid exposition of the mode of administering it. For this, however, we have to look to the concluding chapter but one in the book. This is leaving us entirely in the dark respecting what is absolutely requisite to the right comprehending of all that has preceded this very necessary explanation. And here we cannot forbear to remark on the very confused manner in

which a number of distinct subjects are brought before us, even at the very first chapter of the work, and on the abrupt transition from one topic to another, before any one is at all discussed. We are continually obliged to exert our control over our temper at finding our labours so much enhanced as they really are by the faults of our author; and our humour is put to the stronger test when we consider that the subject of his book has been the theme of a former essay, and that he is neither an unpractised writer nor an unexperienced Practitioner.

Sir Alexander notices, in this chapter, the opinion that it is only that species of consumption, wherein the mucous membrane of the bronchiæ and air-cells of the lungs are alone diseased, but not in an ulcerated state—the phthisis pituitosa of German Physicians, which is either capable of being cured or of receiving benefit from the tar-vapour: but this, he says, is not the only variety of the disease which is curable by this means, “as the cases which terminated in a complete recovery both at St. Petersburg and Berlin were considered to be hopeless until vapour of heated tar was employed,” and as some of the patients had every external mark of a scrofulous constitution, and every symptom of tubercular phthisis.

In the following passage we have the author’s opinion respecting the *modus operandi* of the remedy under consideration, in tubercular consumption:—

“The vapour of boiling tar seems to act in different ways on tuberculated and ulcerated lungs; first, as a stimulus both to the arterial and absorbent system of the diseased parts, *hastening the softening or resolution of tubercles* and the generation of new matter; the remedy coming into immediate contact with the diseased parts: and, secondly, by diminishing the quantity of oxygen in any given mass of air; not by any chemical union with it, although this remains to be proved, but, as I suspect, merely by diluting the atmospheric air with a vapour which contains little or no oxygen, and is almost entirely composed of carbon and hydrogen, and thereby lessening the quantity of that æriform fluid which seems to augment the suppurative process of all sores.” — P. 14.

Now, we must confess, we never before met with such a mass of assumptions, suppositions, and of bad reasoning founded on them, as the above inelegant passage contains. 1st. We have no satisfactory evidence, in the whole book, nor in any other, that tar-vapour is beneficial in tubercular inflammation. 2d. We have as little that it acts on these tubercles in the manner which the author points out. 3d. He gives us no proof that the vapour of tar either diminishes the quantity of oxygen in a given bulk of air, or dilutes it, although very easy eudiometric experiments could readily

decide the point: we certainly think that tar-vapour floating in the air, floats in, and mixes with it, like other vapours, without either diminishing its oxygen or lessening its bulk,—that the vapour is merely superadded to the atmosphere, and whatever good it may do, it does by its presence alone, and not by displacing other constituents, which the author supposes to be hurtful on grounds quite as untenable as the foregoing. We know, from numerous experiments and observations, that, in no situation in which the air has been analyzed, in order to ascertain its exact condition when loaded with various vapours, has the quantity of the air, or its elements, been different from its usual state; but, that the vapour has been a superadded and a fortuitous substance. We would not have been thus particular in examining this topic if we were not convinced that the pathological relations and effects, — the rationale of its operation, which a writer attaches to any active remedy, or class of remedies, becomes the basis on which he is apt to found much of his practical doctrines, and from which he is often led to draw analogical inferences. But, to proceed with the author:

After the positions contained in the paragraph which we quoted; and which furnishes a specimen of the author's manner, he proceeds to state, "that if any benefit is to be expected from medicine in the cure of consumption, it is surely to be expected with more hope of success from those remedies which can be breathed with perfect ease, and brought into contact with the diseased parts, than from medicines which operate only through the medium of the blood, or by sympathy with the stomach." Although this may appear sufficiently specious to the superficial reader, yet it is neither supported by direct evidence nor by analogy. We do not mean to deny that the application of a substance to a diseased surface from without is not beneficial or necessary, but we contend that it generally is the least advantageous part of our practice, and can only be looked to as an adjuvant. It is quite unnecessary to pursue the sophistry of this doctrine, as we are convinced that our readers do not even require to have it pointed out to them.

The author goes on to remark, that while the success of the tar-vapour has been great in some, it has in others provoked hæmoptoe. "In almost all cases," he observes, "where the tar has been duly prepared, its first effects in relieving the dyspnoea, cough, and pains in the chest, have been remarkable." After some desultory, but just observations, he quotes Dr. Young in proof of the well-known opinion that tubercles, when not numerous, may be altogether absorbed, and the patient be restored to tolerable health. The tar-vapour, he

considers, when long continued, in moderate quantity, and in an uniformly equal temperature, to have produced this happy change. And even "in the dry consumption, that is, where the lungs are gradually destroyed by the formation of tubercles without suppuration, this remedy may also be tried, though with this caution, for fear of hæmorrhage, that the air of the apartment be charged with a due degree of humidity as well as the vapour of tar."

Sir Alexander next remarks, that "the quick and hard pulse, and strongly marked hectic fever, which accompany all the varieties of pulmonary consumption, arising from extensive tubercular inflammation, are infinitely less frequent among the poor inhabitants of Russia than of Great Britain or France, where this variety of consumption is so frequent." We are disposed to think, with Sir A., that this may be owing to the frequent use of the vapour bath, to the equal warmth of the apartments, and to the poverty of diet, amongst the Russians; and that the absence of inflammatory diathesis, owing to these circumstances, is more favourable to the exhibition of the tar-vapour amongst them. "What renders," he observes, "the cure of tubercular consumption peculiarly difficult, and indeed almost hopeless, is, that the vapour of tar, or any other remedy whatever, which does good in the softening and suppurative state of the tubercles, is apt to do harm in their inflammatory state." Of this there is no doubt; and the mischief is, that very generally while some tubercles are in a suppurative or softening state, others are in an active state of inflammation: hence the difficulty of treating the disease; for if all the tubercles inflamed at one time, and suppurated at another, our indications of cure could be strictly applied, and our remedies, perhaps, be more efficacious. This state of disease is not, however, always present; for we have often had reason to suppose that the inflammatory condition has been tolerably uniform throughout the tubercles, while the suppurative stage has been nearly equally so.

We shall present our readers with the following excerpt, which contains Sir Alexander's estimate of the virtues of the vapour:—

"Consumption may be complicated with the hemorrhagic, scrofulous, scorbutic, irritable, phlegmatic, bilious, or inflammatory diathesis, all of which require different modifications of treatment. To suppose, therefore, that the vapour of boiling tar, or any other remedy, can be uniformly successful, is to expect an impossibility;" [Is it requisite for Sir A. to tell his professional readers this, or does he write for others?] "but that it is capable of curing several who would inevitably die without it, and that it affords relief in a great number of cases; that it prolongs life beyond all expectation, founded

on the general experience of the disease, and the influence of other remedies; and that it is a safe and excellent auxiliary, well worth new and numerous trials, is all I contend for." — P. 23.

This is sufficiently seductive, yet we are much inclined to think that the professional reader will look for facts, — it will be only proper that he obtains them from his own observation, derived from a fair application of the remedy.

The author next considers the tar-vapour in relation to chronic relaxation and inflammation of the mucous membrane of the bronchiæ. We believe that it is only in this species of the disorder that the vapour has been found to be productive of any benefit in this country. In proof of this, we may refer to the experience of Drs. Forbes and Hastings. Sir Alexander states, that there is no absolute criterion "by which some cases of this disease, when far advanced, can be distinguished from phthisis arising from ulcerated lungs;" for he says, that "in consumption arising from bronchitis chronica, the matter expectorated has every apparent quality of pus." This assertion cannot be the result of close observation; — we should remind our readers that close and correct observation is quite distinct from experience. Now, we can assert that the expectorated matter — an evidence which the author entirely rejects in this case, furnishes the best criterion, especially when viewed in connexion with the history and other manifestations of the disease, by which the presence of suppurating tubercles in the lungs may be inferred. The Physician who has *condescended* to dissect lungs containing broken-down tubercles — and who is there that would not do so, if he desire to have his testimony, on a point of pathology, received as satisfactory evidence? — will immediately detect amid the sputum, which is so abundant in the advanced stage of phthisis which the author refers to, the remains of the tubercles which have suppurated. Indeed, the expectoration which proceeds from the softening and breaking-down of the tubercles has been well described by Laennec, and can never be confounded with ordinary pus by any person who has looked narrowly into the matter.

The following observations are judicious, although they are offered without a sufficient application to the particular variety or stage of the disorder to which they are chiefly adapted: —

"The less air a consumptive patient takes into his lungs at once the better; he ought to live with as little air as possible, and, consequently, with as little motion of his lungs as possible. Unfortunately this is not always in his power to regulate, as the quickness and mode of his respiration depend greatly on the circulation, and is therefore not under his command. It is on this account that all remedies

which diminish the irritability of the heart and arterial system, and which produce a certain torpor in the lungs, through the influence of the brain, are often usefully employed in consumption, provided they are not employed out of season, or at too great an expense of the vitality of the patient. Hence hydrocyanic acid, certain preparations of opium, hyosciamus, digitalis, and cicuta, do much good in many cases, though only for a limited time. The tepid bath, minute doses of emetic tartar, sometimes with, at other times without, minute doses of quicksilver in its lowest state of oxydation; the muriate of lime alone, or in combination with narcotics, although acting on different principles, yet as their action terminates in taking off inflammation, are also of great assistance, and may be judiciously employed in some periods of the disease; attention being paid to the constitution of the individual." — P. 28.

With respect to the tar-vapour, the author remarks, that the object is to impregnate the atmosphere of the apartment with the pure vapour only, the pyroligneous acid having been previously dissipated. As this acid has a very sensible effect upon the eyes, he considers this circumstance to be a good criterion of its presence. He concludes this chapter with some reference to three cases, which he believed to have been cured by the vapour. As we cannot consider them to be cases of tubercular phthisis, nor otherwise deserving quotation, we refer our readers to the work itself for their history.

In order that this subject may be before us in a full and connected manner, we now proceed to notice the author's *tenth chapter*, "*on the method of employing the tar-vapour, and on the best temperature of hospitals and houses for the recovery of the consumptive.*"

Sir Alexander considers the tar obtained from the roots of the white pine to be the most easily inhaled and the best. He advises it to be boiled for a few minutes in the open air, to dissipate its pyroligneous acid, which is irritating and hurtful to the lungs, "before being brought into the bed-room of the sick, and then to every pound of it ought to be added from one to two ounces of the subcarbonate of potash."

"I generally order the potash and tar to be well mixed together, then a little water to be added, and the tar, potash, and water, to be again mixed. By this means the alkali comes in contact with almost every particle of the acid, and by uniting with it prevents its disengagement."

"The watery solution which collects on the top of the tar, if in great quantity, may be poured off: if not, it is soon dissipated by the first application of heat, and in dry weather its evaporation in the chamber of the sick has appeared to me to do good. The tar to be employed ought always to be chosen as liquid as possible."
 "Whenever a white vapour arises from the tar while boiling, it is a proof either that too much heat is applied, or that the tar contains

impurities." " If a white smoke arises from the tar, from overboiling, a violent fit of coughing is generally produced, and therefore the tar ought merely to simmer or boil with the lowest possible heat. In this case the whole air of the chamber becomes soon impregnated with the invisible vapour, and then, in the cases in which it is suitable, it is breathed with ease and relief." — P. 230.

The author recommends the tar to be boiled until it becomes thick and ceases to yield an invisible vapour, when it should be rejected. He afterwards gives the following instructions respecting the patients' apartments:—

" In private practice I generally select two adjoining rooms for the consumptive patient, and by shutting up the door of the bed-room which opens immediately on the stair-case, and, in cold and windy weather, by causing all the windows to be completely shut, by pasting slips of paper around all the openings, the air of that apartment at least becomes more easily charged with the vapour."

" All ingress to that apartment takes place through the adjoining one, and as it is also warmed and charged with the vapour accordingly as the case requires, the patient enjoys, by means of these slight precautions, more uniformity of temperature, and a better regulated atmosphere."

" The simplest way of charging the apartment with the vapour, is to put about a pint or upwards of the prepared tar into any flat dish of iron, copper, or earthen-ware. This is to be placed on a stand about a foot from the ground, so as to admit a suitable lamp under it. This apparatus must not be placed too near the patient at first, because it is impossible to say, beforehand, how it may affect him, and in what degree of force he can bear it." " In warm weather it is advisable to have the apparatus on the outside of the door, and the vapour to be admitted by means of a tube passing through it. The best temperature for consumptive patients is from 60° to 65°; but this must be varied according to individual constitution." — Pp. 231, 236.

Sir Alexander ascribes the failure of the tar-vapour, in this country, to the neglect of the foregoing rules, which ought to be strictly adhered to in administering it. He proceeds in the *eleventh chapter* to give *general precautions* as to its use: these are, —

" To begin with a moderate charge of boiling tar, and to increase it gradually in strength. When the expectoration is copious, when there is no pain or sense of tension in the chest, it almost always affords relief in the act of breathing, even on its first application; but if there be any inflammation present, or a very scanty and difficult expectoration, with long paroxysms of coughing, it is often a hurtful and always a doubtful remedy; and, therefore, if found to induce any pain, dyspnoea, or dryness of cough, it ought to be desisted from."

" Upon the slightest appearance of hæmoptysis the vapour must

be avoided. In very dry weather it is useful to have a basin of wetted sand in the apartment, to supply moisture."—Pp. 239—40.

In the chronic tubercular phthisis, for which the author so strongly recommends the vapour, it frequently occurs that a new cluster of tubercles become inflamed, either as a natural event in their progress, or from exposure to cold. During this state, which is known by an aggravation of cough, with scanty expectoration, the tar-vapour must be either altogether left off, or applied in a very diluted form: "but when the tubercular mass is softened and begins to be expectorated," the force of the vapour is recommended to be increased.

An *appendix* of seven cases successfully treated by the tar-vapour follows this chapter, to which we beg to refer our readers. We do not consider any of them to be satisfactory instances of tubercular phthisis, although they undoubtedly might have terminated unfavourably under any other mode of treatment. According to the account of the trials which have been made of this remedy in the hospital at Berlin, and published in Hufeland's Journal for 1820, it appears that, "of fifty-four patients labouring under pulmonary consumption, four were cured, six left the hospital in a state of convalescence at their own request, sixteen did not receive any benefit from the remedy, twelve appeared to get worse under the treatment, and sixteen died." It was found to increase the symptoms of inflammation, and, consequently, frequently to disagree with young people, with those who are endowed with a very irritable fibre, with those who are of an inflammatory diathesis, and with those who are disposed to hæmoptysis. Its success was most marked in such patients as laboured under a blennorrhœa pulmonum (phthisis pituitosa, or chronic inflammation of the bronchiæ and air-cells) and laryngeal phthisis.

Chapter II. "On the influence of temperature and climate in preventing and curing consumption."—Sir Alexander commences this subject with observing, that the scrofulous constitution differs from the healthy one chiefly in the weak and lax conformation of the vascular and absorbent systems in the former: "their coats are too weak for the actions of health. The absorbents, in particular, are of the most delicate texture, and are more easily torn by injected fluids than the same vessels of a healthy person. It is natural, therefore, to suppose, that the congeries of vessels, which form the lymphatic glands, should partake of the same delicacy of structure."

"The contractile power of all living vessels, whether sanguiferous or lymphatic, seems to be proportionate to the physical strength of

coats, and as their chief functions depend upon their contraction, it is evident that these must be more or less imperfectly performed, according as this power is more or less deficient. — Languidation and partial congestions are the more immediate effects of defective organization; hence the cold feet and hands, the sense of torpor and debility, and the first causes of scrofulous inflammation, which the glands and membranous parts of a scrofulous person are subject to.” — P. 46.

The above is the basis of the author's pathology of scrofulous consumption. He proceeds to state (if we rightly understand him, for he is by no means perspicuous on the point), that, “during congestion of fluids in absorbent and lymphatic vessels, and in the conformation of these vessels favours, and which takes place before inflammation arises, new matters are generated, which begin to be deposited in their extremities. In this way,” he adds, “the matter of tubercles, and various other scrofulous tumours, that have not as yet become indurated, appear to be formed. When formed, they do not seem to act so much by virtue of any specific poison or acrid humour, as by the mechanical irritation which they excite. In the lungs they compress both the air-cells and blood-vessels.”

The author passes from this subject to inveigh against the practice of sending consumptive patients to the southern parts of Europe in an advanced period of the disease—to the warm places in which the malady is frequent and speedily fatal. We believe the predilection to these situations, which to a great measure arose from the fashion of the times, to be passing away before the more generally diffused information which has been acquired on the subject.

Sir Alexander informs us that, although the scrofulous constitution is more common in the northern and middle parts of Russia than in England, “and commits greater ravages and mutilation than are ever witnessed in this country,” yet consumption is comparatively rare, especially amongst the poorer classes. Scrofulous disorders in the Russian empire are mostly confined to the external set of glands, to the skin, the eyes, and throat, and to the bones, especially those of the extremities: the lungs suffer rarely, except in public houses, and among those who adopt the European dress and manners.” Sir A. attributes this to the low, acidulous, and unwholesome diet of the Russians; to their very warm apartments; to the great warmth of their fur clothing; and to their constant attention to preserve the circulation free and unobstructed on the surface of the body. The higher classes, he informs us, and the military, who have adopted the

European fashions, "are becoming every day more and more subject to consumption."

The author observes, that many of the places usually selected for consumptive patients, such as Madeira, Penzance, &c., might be good residences for correcting the men tendency to consumption, "provided tubercles were not already formed in the lungs, or only beginning to be formed." "The sea-coast," he adds, "to which so many pulmonary victims are sent, is highly injurious to them, let the situation be where it may, whatever be the variety of the disease, provided ulceration be present; but where no real ulceration has taken place, as in the phthisis pituitosa, or that arising from neglected bronchitis, it now and then does good." For farther observations on the influence of climate we must refer to the work.

Chapter III. "On tubercular consumption, its prevention, and cure."—Sir Alexander makes no mention of Dr. Baron's theory of the formation of tubercles, but considers, with Baillie, Bayle, and Laennec, that they are secreted or deposited by the vessels, and as the deposition proceeds they unite, forming large masses, and, consequently, destroying the healthy texture of the lungs, and rendering them impermeable to the air. He adopts Laennec's account of the progress of the tubercles, which is well known to our readers. The period of life which he considers to be most subject to the disorder, is from puberty to the age of fifty. He divides those who are born with an hereditary disposition to scrofula into two classes: those who are, during the first years of infancy, well proportioned and formed, until they become weakened by incidentally debilitating causes, or by growth; and those who are originally possessed of a delicate frame, and have, combined with hereditary influence, flat or compressed chests, transparent skins, and long and prominent necks. The first class of scrofulous children—those well formed and plethoric, "may yet have," he observes, "great vascular weakness in one or more parts of their system, disposing them to glandular and to membranous inflammation; but notwithstanding this, they seldom fall victims to consumption, except through the ignorance or neglect of their parents." "The idea of making such children hardy, by a kind of Spartan education, such as dressing them lightly, exposing them to all kinds of weather, plunging them daily in a cold bath, has been the source of mortality among some, and of lasting infirmities with many others." In support of this dictum, which is undoubtedly just as far as scrofulous constitutions are concerned, the author contends that this state of the system is always

increased by languid circulation; and in those who are very weak, the chill produced by cold bathing, instead of being immediately followed by heat and animation, not only continues for a considerable time after the patient quits the bath, but is succeeded by cold extremities, palpitation of the heart, contracted features, headach, dyspnœa, and every symptom of internal congestion and want of a free circulation. He very justly recommends that scrofulous subjects should have rather too much than too little clothing, and, unless when labouring under disease, a full diet of wholesome food.

If the appetite be deficient from the accumulation of mucous sordes on the stomach and bowels, Sir A. advises the pulv. scammon. comp., with or without calomel, to be given according to circumstances. He has found the common blue oxyde of mercury, with antimony, and in combination with the pil. galban. comp., and a strong decoction of sarsaparilla, to be very useful medicines for reducing scrofulous glands, and assisting in the resolution or absorption of all scrofulous depositions. He next offers some observations on the use of mercurials in the treatment of these disorders, and chiefly recommends small, and, indeed, minute doses of calomel. In scrofulous patients of a pale emaciated countenance and weakly habit, mercurials are very properly not recommended, except as aperients.

When the first symptoms of tubercular phthisis appear, as slight dyspnœa and cough, the author prescribes an uniformly mild temperature; the tar-vapour; sponging the chest with tepid vinegar and brandy, in a warm apartment; rubefacients; the tartar emetic ointment; a mild, yet nutritious diet; and an open state of the bowels.

When tubercles are forming in the lungs, or are already formed, the symptoms are—rapid emaciation and loss of strength, a frequent hacking dry cough, dyspnœa on exercise, flying pains in the chest, a peculiar shrinking of the features and delicacy of look, &c. When they become numerous, large, inflamed, or softened, the cough gradually increases; the expectoration, which now supervenes, is a curd-like mucus, or of a puriform character, and sometimes tinged with blood; the decay of flesh and strength is rapid, and there is generally symptomatic fever.

The author considers tubercular phthisis to be of two kinds—the one slow, insidious, and unaccompanied with a quick pulse and daily symptomatic fever; the other characterized by daily exacerbations of hectic fever: the former he views as chronic, the latter as acute,—the one being attended with symptomatic fever at its close only, the other from its commencement. He does not consider these forms of the

disorder as a difference in its degree, but as the result of the constitution of the individual and of the state of the lungs. This is a distinction without a difference; for what, we might ask, are the manifestations of the disease, but the effects of the organic derangement? As the condition of lesion may vary from one extreme of intensity to another, and proceed with different degrees of velocity, presenting all the intermediate shades, owing to controlling circumstances, among which diathesis, exposure to various noxious influences, &c. are, doubtless, very prominent, so may the resulting phenomenon present every intermediate form or degree, from the most chronic to the most acute. Our limits cannot permit us to follow the author in his observations on the advanced stage of the disease, nor in his remarks respecting its prognosis. These topics are familiar to our readers.

Sir Alexander recommends, in the chronic form of tubercular phthisis, rigid confinement to the house during winter in an apartment always kept charged with the vapour of tar. He prohibits the use of tea, coffee, and acid drinks; and recommends, in their stead, soup of beef or mutton, for breakfast, if the patient have sufficient appetite; if not, cocoa, milk or chocolate, according to the facility of digestion. When there is a craving for food between breakfast and dinner, he allows calf's-foot jelly, and, at dinner, any one kind of animal food that agrees with him.

The medicines which Sir A. has "found to assist nature the most effectually in promoting the resolution and discharge of the tubercular matter, have been a combination of the compound pill of galbanum, with the sulphurated oxyde of antimony, or the pulvis antimonialis, now and then calomel or cinnabar, and always some extract of hemlock and a little opium."* He very justly advocates the propriety of employing compound remedies when experience evinces their efficacy. Along with the above-mentioned pills he gives the Iceland moss and sarsaparilla.

"It is in this variety of consumption," he observes, "that much good is sometimes derived from other gentle stimulants, the medicinal powers of which are chiefly exerted on the absorbent and lymphatic system of vessels, such as the seeds of *phellandrium aquaticum*, &c."

* R Hydrarg. Sulphuret. Rubri, 3ss. (vel Pilul. Hydrarg., ℥j
Antimon. Sulphuret. Præcip., ℥j.
Extract. Conii, ℥ij.
Pilul. Galban. Comp., 3j.
Opii Puri, gr. v. — gr. xij.
Syrup. Solut., q. s. M.
Divide in pilul. xxx. — Dosis j.—iij. ter quotidie.

much in vogue at present in Germany." "The seeds, which are the part employed, are oblong, striated, and resemble in size the anise seeds. They have an aromatic and rather acrid taste, and are best exhibited in substance from the dose of one scruple to that of a dram, twice or thrice a day.

"When the pulse is uniformly quick and hardish, where the cough is frequent, and the expectoration scanty and difficult, the seeds of the phellandrium have uniformly appeared to me to do harm; but in such cases of tubercular phthisis (the chronic) as I have been describing, and in phthisis pituitosa, or far advanced cases of chronic bronchitis, they do good. In short, they act very much like the *senega* root, so celebrated formerly in pectoral complaints." — P. 95.

Sir Alexander proceeds next to offer observations on acute tubercular phthisis, or that characterized from the commencement by febrile heat, pains in the chest, a hard, quick, and small pulse. In these cases he supposes a quickly spreading inflammation to have attacked the whole tubercular mass, which speedily runs to suppuration. Sometimes the inflammation is confined to one cluster, which has assumed the inflammatory action, during its maturation, owing to exposure to cold or other exciting causes: small vomicæ are then often formed, including these tubercles as a nucleus. In these cases there is much hectic fever. Occasionally this acute state becomes arrested and converted into one of a more chronic kind.

The author remarks, that the quickness of the pulse in this form of the disease is often referred to debility; and, consequently, that an injurious mode of practice is often founded on the supposition. In this we entirely agree with him. We have frequently observed hoary experience prescribe squills, gum ammoniac, steel, and myrrh, in the acute form of tubercular phthisis, wherein the pathological Practitioner would have employed an opposite class of remedies.

In this common variety of consumption Sir A. does not use the tar-vapour, but very properly recommends such remedies as are found most efficacious in allaying febrile action,—the scrofulous affection, and the frequency of the cough, modifying the prescription.

"Stimulating expectorants and powerful tonics are to be carefully avoided, as has been already observed, on account of their tendency to excite inflammation around the tubercles, and to promote the speedy formation of vomicæ, an effect which I have seen both squills and gum ammoniac produce, even when given in very small quantities. These two medicines I have entirely renounced in all cases where I either dreaded consumption or believed it to be already formed.

"In cases of dry cough, such as often accompanies tubercles in their earliest stage, one is much tempted to give both squills and gum ammoniac in combination with opium, ipecacuan, with demulcent

medicines, or in small doses, with hyosciamus and other narcotics, as expectorants; but comparative trials have convinced me that they generally do harm, and tend to bring the tubercles into a speedy and often extensive ulceration. If the prescriptions in which these medicines enter seem to do good, it will be found that the benefit is produced by the opium or other narcotics, and that if the squills and gum ammoniac are omitted, still more good is obtained. But the best expectorants, that is, the best remedies for subduing the peculiar inflammation and excitement of tubercular lungs, are the red sulphuret of quicksilver, combined with any of the preparations of antimony most commonly in use, such as a very diluted solution of its tartrate, or a due dose of its red sulphuret, or the common pulvis antimonialis. The remedies I chiefly trust to in the acute tubercular phthisis are referred to in *Formulæ* 9, 10, 11.*

"The digitalis, hyosciamus, and hemlock are useful additions for allaying the frequency of the cough. *See For.* 12, 13†." Pp. 100—1.

In the more advanced cases of tubercular phthisis, where he suspects that nature is not active enough in softening or resolving the tubercles, the author employs myrrh and the gum galbanum, combined with antimony and opium, or extract of conium or hyosciamus, according to the circumstances of the case. He does not, however, take an opportunity of stating the

* 9. R Decocti Hordei Comp., ℥ss.

Liquoris Antimon. Tartar., 3j.

Magnes. Sulphat., gr. xij.

ft. haustus tertîa quâque horâ sumendus.

10. R Hydrargyr. Sulphuret. Præcipit., gr. iij.—gr. vj.

Pulv. Antimonial., gr. j.—gr. iij.

Potassæ Nitrat., ℥ss.

Sacchar. Purific., ʒij. M.

ft. pulv. 6tâ quâque horâ sumendus.

11. R Antimon. Sulphuret. Præcipit., gr. j.—ijj.

Ext. Hyoscyami, gr. ss.

Ext. Papaveris, gr. iij.

ft. pilula, 4tâ quâque horâ sumenda.

† 12. R Succî Limonum, ℥ss.

Potassæ Carbonat., q. s. ad saturandum.

Decoct. Sarsaparillæ, ℥ss. — 3j.

Tinct. Digitalis Purp., min. x.—xxx.

Mucilag. Acaciæ, 3j.

ft. haustus 6tâ quâque horâ sumendus. — In acute phthisis.

13. R Ext. Conii, ℥ss.

— Papaveris, 3j.

Antimon. Tartariz. gr. v.

Confect. Rosæ, q. s.

ft. massa, in pilulas, No. xxx. dividenda.

Dose. — One or two to be taken three or four times a day, according to circumstances.

general indications of cure by which he is guided in treating this form of consumption, until he is thus far advanced in the consideration of the subject. "The chief objects," he observes, "to be held in view, in every case of tubercular consumption, let the period of the disease be what it may, except in the very last stage, are — 1st. To prevent the formation of new tubercles. 2d. To assist nature, either in causing them to be absorbed, or in the natural process of softening and discharging them. 3d. To prevent excess of action or inflammation. 4th. To prevent the rapid loss of strength." In order to fulfil the first of these intentions, Sir A. recommends blisters, the employment of the tartar emetic ointment, and, in some cases, setons and issues. When the tubercles are softening, and are not too numerous and extensive, he enjoins a judicious diet, regulated temperature, and the tar-vapour. When, however, the pulse is hard or full, the skin hot and dry, and the expectoration scanty, the vapour ought not to be used. He praises narcotics in the advanced stages of the disease. He considers emetics to do harm when tubercles are in their first stage, to be beneficial only when the disorder is characterized by copious expectoration, and to be doubtful remedies in the last stages of consumption. With respect to steel, he is firmly of opinion that it is a most injurious medicine in tubercular phthisis. In the pituitous form of the disorder, he, however, conceives that it may sometimes do good. He thinks that the watery extract of myrrh, with a decoction of Iceland moss, is the best tonic that can be adopted with the view of supporting the strength of the patient. Of the cinchona and the uva ursi he has had no experience.

Sir Alexander adds nothing to what is generally known respecting the treatment of the colliquative sweats: he thinks that one of the best ways of diminishing them is by subduing the violence of the febrile paroxysm as much as possible. On the subject of diet, he observes, that the greatest benefit has been obtained from milk; "from weak animal broths of the least stimulating quality in some cases, strong animal broths in others;" from vegetable diet rigidly adhered to; from mere animal fat and farinaceous food, in some instances, and, in others, from snails or glutinous substances.

Sir A. concludes this chapter with some remarks on the complication of tubercular phthisis with chronic hepatitis, bilious flux, syphilis, rheumatism, and a scorbutic habit. In all these forms, except the last, he recommends the use of mercurial medicines, according to circumstances. In the rheumatic complication he enjoins the use of the decoction of sarsaparilla and dulcamara, with the addition of the muriate

of lime or the subcarb. of soda; also, conium, opium, aconitum, &c.

Chapter III. (IV.) "On pulmonary consumption, arising from hæmoptysis, or hæmorrhagy from the lungs; its prevention and treatment."—Sir Alexander considers that hæmorrhage proceeds in three distinct ways: 1st, it produces at once fatal congestion or suffocation; 2d, the congestion not being extensive is in a great degree relieved by the loss of blood, yet returns after a longer or shorter period; 3d, the blood effused in the parenchyma of the lungs, together with accidental causes, produces inflammation, which is soon followed by ulceration. When hæmorrhage occurs in a mal-formed chest, small blood-lettings should be employed, with warm clothing, and those means which tend to expand the chest. Artificial expansion of this cavity should be particularly insisted on at an early age. If a disposition to hæmoptoe is connected, as it frequently is, with a scrofulous habit, or with tubercles, warm clothing, an uniformly mild temperature, &c. should be attended to.

The *treatment* on which the author chiefly insists, in hæmoptysis, is as follows:—The feet and legs of the patient are directed to be put in warm water, and afterwards wrapped in some warm woollen dress; while the head, neck, and chest, may be left exposed to the cold air; and, as soon as the circulation is free in the extremities, the patient is to be bled to an extent which varies according to his habit and constitution: a blister is next to be applied on the sternum, and another on the back, and a combination of nitrate of potash and sulphate of magnesia given every two hours, until one or two loose stools follow. Sir A. afterwards trusts to emollient drinks, and such doses of the nitrate of potash and cream of tartar, as the patient's stomach can bear. In cases of recurrence of hæmoptysis, when the heat and febrile symptoms have been subdued, he gives the pulv. ipecacuan. comp. at bed-time, and the sulphate of potash, with or without the nitrate of potash, in the morning, so as to procure one or two stools. If the patient be delicate and weak, the Iceland moss is recommended. Opium, cicuta, hyosciamus, and digitalis, are given to allay irritation and the frequency of the cough: the common expectorants do harm. The author by no means approves of the use of astringents; and he considers the tar vapour to be hurtful in this variety of the disorder. The common complication of hæmoptysis with *tubercular phthisis* requires attention to a great part of the curative means mentioned under that head. A milk diet, and very light and mild nourishment, are alone beneficial in hæmoptysis.

Chapter IV. (V.) "Practical observations on that variety of

consumption which arises from neglected peripneumony, or acute inflammation of the lungs, and its treatment." — Sir Alexander justly considers this a frequent form of the disease among certain classes of labourers, who are exposed to great and sudden vicissitudes of temperature, or to the inhalation of mechanical stimulants. After differing with Laennec respecting the frequency of vomicae or abscesses of the lungs, he offers some remarks connected with the pathology of this form of consumption. As these contain nothing more than as well known to our readers, we will only notice some of his practical observations.

He divides patients who become consumptive in consequence of neglected peripneumony into two classes; those who have tubercles already formed, and those who are entirely free from them and any other scrofulous disposition. In open abscess, he considers antimonial medicines, mercurials, and narcotics, with the exception of opium, to be hurtful. "The remedies," he conceives, "which do most good, in this variety of phthisis, are dry vomits, issues in the side affected, certain pectoral stimulants, and mild tonics; exercise as much as can be borne, a diet suited to the individual, and, above all, as the most powerful and useful agent, an atmosphere charged with the vapour of tar." The complication of abscess in the lungs, with inflammation or abscess of the liver, with syphilis, rheumatism, gout, scurvy, &c., is noticed by the author, as circumstances requiring a modified practice, which the judgment of the Physician will point out. In open abscess of this organ, he recommends the tar vapour to be breathed, at first, only two or three hours at a time; and if it should excite pain in the chest, and increase the cough, or diminish the expectoration, especially in inflammatory temperaments, he substitutes the inhalation of the vapour of a decoction of anise seeds, marsh-mallow flowers with poppy-heads, and a little chamomile flowers, which re-establishes the too suddenly arrested suppuration: after its return the tar vapour is again to be employed, but in a very diluted state while there is any disposition to active inflammation. As he conceives the state of atony soon to come on in the progress of ulceration, he considers it better to anticipate it a little, than to defer, for too long a period, the use of the tar vapour.

When the force of the constitution is much reduced, issues and setons are hurtful, while the lichen Icelandicus, polygala senega, cinchona, myrrh, galbanum, sulphate of zinc, and acetate of lead with opium, appear to do the most good. The author's observations are here very judicious.

"However rapidly," he observes, "the strength of a patient may sink in this or any other variety of phthisis, however much tonics and

pectoral stimulants may be indicated by the general appearance of the patient, their effects on the lungs must be watched with the utmost attention; for if the action of the heart be increased, so as to become disproportionate to the activity of the vascular system of the lungs, fresh congestion and inflammation will take place around the ulcer; an effect which is immediately announced by increase of febrile heat, a more frequent cough, diminished expectoration, and increase of dyspnoea.

"Exercise on horseback, when it can be borne, or on foot, or in a carriage, are all of them useful aids in this kind of consumption, especially for interrupting the daily paroxysms of hectic fever; and it is also in this kind of phthisis that a sea voyage does, perhaps, the most good.

"Since I have employed the vapour of tar in this complaint, I have seldom found it necessary to employ other tonics than the Iceland moss and senega root, together, as I have already stated, with occasional doses of the superacetate of lead and opium, which I omit and renew according as the purulent expectoration is profuse or otherwise. But I beg to observe, that it is not the Iceland moss of this island, but that from Norway, Iceland itself, Sweden, or Finland, which is to be trusted to.

In the frequent complication of vomicae with hepatic affection, the author advises, in its early stages, local blood-letting, blisters, and mild mercurials. In the second, or atonic period, he recommends the external application of mercury, the pilul. hydrarg. in minute doses, the extract and decoction of taraxacum and chelidonium with small doses of tartrate of antimony.

*Chapter V. (VI.) "On bronchitis, and the consumption which frequently arises from it,—its prevention and cure.—*This subject was so fully considered in the fourteenth volume of this journal, that we should not now stop to notice it, were it not on account of those who have subsequently become our readers.

Chronic bronchitis, in its advanced stage, the phthisis pituitosa of the Germans, is characterized by a profuse expectoration of vitiated mucus, a general wasting of flesh and strength, general soreness of the chest without stitch or fixed pain, little or no hectic fever, until the strength is greatly reduced, and by more or less disorder in the digestive organs. Our limits prevent us from tracing the progress of the derangement and its diagnosis from common catarrh, in its early stages, or from tubercular phthisis in its advanced period. We must also refer to the work for the author's observations respecting the frequent connexion of this disorder with disease of the liver. The treatment of this species of consumption is considered under the following head.

Chapter VI. (VII.) "Of the prevention of bronchitis and

consequent phthisis from measles." — We think Sir Alexander is perfectly just in reprobating the injurious lengths to which innovations in the treatment of disease have been carried, from false analogy. The treatment of measles has been often hurtful, owing to the extent to which cold and cooling drinks have been employed in it. In consequence of the repression of the eruption from the surface, which this mode has given rise to, inflammation of the bronchiæ or the lungs has often supervened. Without following the author in his remarks on this subject, we will merely notice the *treatment*, which he recommends in the phthisis pituitosa, and which is nearly the same, whether it arises from measles, or cold after scarlatina, or from neglected catarrh. Where the disorder is unconnected with tubercular inflammation or abscess in the lungs, Sir Alexander considers it to be frequently curable; and for this purpose he prescribes the vapour of heated tar, occasional emetics, blisters, rubefacients, the decoction of Iceland moss and the radix Senega combined, small doses of the sulphate of zinc and extract of myrrh, the cinchona alone, or with Iceland moss, the columba root, and other similar tonics, the balsam of Copaiba, and the balsam of Peru. "These remedies," he remarks, "may be changed or combined, according to the constitution of the individual, and the circumstances of the case. Along with these, opium, and some other narcotics, are to be superadded as palliatives for allaying the frequency of the cough."

"The disease, although generally an atonic one, does not always admit either of tonics or pectoral stimulants, and the practitioner must be on his guard while administering them. An increase of cough, or any painful sensation of tightness or uneasiness at the chest, ought to make him desist. In such cases blisters, rubefacients, or a mild diet, and demulcents, are the proper means, until all uneasiness ceases, and then Iceland moss, with or without the senega polygala, according to the effects produced, are to be persisted in.

"Emetics are useful in almost all cases, because they assist the expulsion of much mucus from the bronchia, and consequently produce an intermission in the cough. In many people, also, they seem to excite the whole of the absorbent system, and therefore produce a diminution of the thinner parts of the mucous secretion.

"In many cases, where the expectoration has been very great, I have given the acetate of lead in minute doses with opium, with the greatest success."

Bleeding from the arm, or by leeches, is seldom admissible in phthisis pituitosa, but is often serviceable while active inflammation of the mucous membrane exists. The complication of this kind of consumption with affections of the liver is combated by small doses of the mercurial pill, in combination

with the galbanum pill and extract of conium, and by the tar vapour, the Iceland moss, and the extracts of taraxacum and chelidonium.

Chapter VII. "Of the laryngeal and tracheal consumption."—Acute inflammation of the larynx and trachea, terminating in ulceration, is one of the most hopeless forms of consumption. Sir A. recommends the usual antiphlogistic means to be tried during the stage of inflammation; and, when ulceration has commenced, which is evinced by loss of strength and flesh, by change of the voice, by the mucous sputum containing purulent matter, by hectic fever, &c., he advises the tar vapour with a mild temperature, the Iceland moss, and the balsams of copaiba and tolu combined with sulphur, at bedtime. We are surprised that he makes no mention of the production of a very copious eruption by means of the tartar emetic ointment, from which we have seen the best effects in this disorder.

Chapter VIII. "Is consumption hereditary?"—Sir A. concludes, that the disposition to this malady is often hereditary, especially in that branch of the family which partakes most of the physical character and organization of the unhealthy parent; and that the disposition may be entirely removed in the third generation, by the influence of climate acting from infancy on one or two successive generations, or by marriage.

Chapter IX. "Is consumption contagious?"—Sir Alexander confirms the opinion which has been generally entertained in the south of Europe, and corroborated, even as regards this climate, by the experience of some enlightened Practitioners, respecting the contagious nature of consumption. Instances in proof of the position have come under our own observation; and we have little doubt of a purulent secretion from a mucous surface being capable of propagating a similar derangement to that from which it is derived, when applied to the same description of mucous surface of an individual, the state of whose system is at the time favourably disposed to be affected by it.

Sir Alexander informs us, that in the latter stages of consumption, especially when the expectorated matter is offensive to the smell, the breath of the patient "acts like a specific poison on other people, if too long exposed to it at any time. Among married people it often causes the death of the surviving party, although not otherwise disposed to phthisis." The author concludes the chapter with some interesting observations on this subject, and with the testimonies of other writers in support of the same opinion.

The length of our analysis sufficiently evinces the value put upon the author's experience and practical observation.

The faults of the work have been already mentioned. These we consider sufficiently great : we are disposed to place them to the account of haste and negligence, and not to the want of ability. But negligence in an author, and more particularly in a medical one, requires to be visited with due censure. It is true there are Physicians who esteem not the allurements of literature, and who only value experience and medical knowledge, and that too, of an empirical kind ; while there are others who, although deficient in medical and scientific information, yet cherish their self-love with the idea of possessing some literary acquirements : but they should be all aware that a respectable proficiency in both departments of knowledge elevates the medical character ; and that, while literature imparts dignity to it, medical and scientific information extends its usefulness.

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

I.

*Experimental Researches on Absorption and Exhalation, read at the Institute of France, by M. FODÉRA.**

It is no longer contested, at the present day, that it is to the experimental method we owe the major part of the important discoveries which have been made in physiology from Galen's to our own day. By it Haller changed the face of the knowledge of life. Bichat added, richly added, to it ; and in our time M. Magendie has given to it a fresh impulse.

It would be a curious work to place in parallel, as regards their number and importance, the phenomena discovered by simple observations collected in a state of health or disease, and those which experiments have revealed to us. We should see that, in the majority of cases, experiments have elucidated and perfected what observation had only been able to commence. Thus the most ancient physiologists had ob-

* Analyzed by M. Andral, jun. (*Journal de Physiologie, par Magendie. Janvier, 1823.*)

served some isolated facts, which appeared to announce to them that a more or less regular motion was impressed on the liquids contained in the different vessels; but the discovery of the circulation of the blood was the fruit of the experimental method.

Observation had made known, in a sufficiently vague manner, the phenomena of absorption. Hippocrates had observed, *Aspirabile totum corpus tam foras quàm intro*. But, by the aid of experiments, these general notions have become very much more precise. It is by experiments that the agents of absorption have been discovered; it is by them that the absorbent faculty of each tissue has been strictly appreciated. The recent researches of M. Fodéra, on absorption and exhalation, the ingenious experiments which he has performed, the curious results to which he has been conducted, afford us a new proof of the advantage of the experimental method.

M. Fodéra's end has been to demonstrate that exhalation, which he calls *transudation*, and absorption, which he names *imbibition*, are similar phenomena, owing to the imbibition of the different vessels; operating in the first case from the interior of the vessel to the exterior, and in the second from the exterior to the interior.

M. Magendie had already proved that venous absorption takes place by imbibition.* One of his experiments consisted in completely isolating a portion of vein, and placing its surface in contact with an active poison: its presence was soon discovered at the internal surface of the vessel. M. Fodéra has inverted the experiment. He injected a poisonous substance, with every proper precaution, into the interior of a portion of artery comprised between two ligatures, and isolated from its cellular tissue, its lymphatics, and its *vasa vasorum*: poisoning took place. He obtained the same result by filling with poison a portion of an artery, vein, or of intestine, removing and placing them either at the surface of a wound made in another animal, or in the abdominal cavity. In these different experiments, the rapidity of the poisoning appeared to vary according to the age and kind of animal, the thickness and length of the portion of vessel or intestine, its greater or less distention: the more or less perfect solution of the injected matter, &c.

M. Fodéra has also seen gases absorbed in the same manner. He placed in the peritoneal cavity of a rat sulphuretted hydrogen, inclosed in a portion of intestine moved from another animal; at the end of some

Symptoms of poisoning manifested themselves, and the sulphuretted hydrogen was no longer found in the intestine.

If we expose, in a living animal, an artery or vein, an oozing (*un suintement*) is observed to take place through its parietes. This oozing augments, if a ligature be applied to the vessel: different dropsies may likewise be produced by the ligature of the great venous trunks.

M. Fodéra concludes, from these facts, that exhalation is only a phenomenon of transudation through the parietes of the vessels, as many Physicians had thought, before the exhalant vessels were imagined.

The following experiments prove that, at least, on the dead body, transudation of liquids may take place at the same time from the interior to the exterior, and *vice versâ*, through the vascular or intestinal parietes. M. Fodéra filled a portion of a rabbit's intestine with a solution of prussiate of potash, and plunged it into a solution of hydrochlorate of lime: he introduced into another portion some hydrochloric acid, and surrounded it with sulphuric acid: finally, he placed a bladder, filled with tincture of turnsol, in a solution of gall nuts. Sometime afterwards he found in the interior of these portions of the intestine and of the bladder, hydrochlorate of lime, sulphuric acid, and gallic acid, by the tests of nitrate of silver, hydrochlorate of barytes, and sulphate of iron; and in the liquids in which they had been immersed, prussiate of potass, hydrochloric acid, and tincture of turnsol, by the tests of sulphate of copper, the nitrate of silver, and by the reddish colour of the solution of galls being rendered bluish by the potass.

On injecting at the same time into the pulmonary vein of a sheep, a solution of hydrochlorate of barytes, and one of hydrocyanate of potass into the trachea, M. Fodéra also found hydrocyanate of potass in the pulmonary artery, and hydrochlorate of barytes in the bronchiæ.

Similar phenomena may be produced upon a living animal. The author has found, for example, in the bladder or in the thorax, substances which had been injected into the peritoneum; and in the abdominal cavity, substances which had been introduced into the thorax or bladder. In these experiments he employed the solution of galls and sulphate of iron, or rather, the latter salt and prussiate of potass.

The black or blue colour, announcing that transudation has taken place, is frequently not observed until the end of more than an hour: it may be rendered almost instantaneous by putting in action the galvanic influence. For this purpose, the ingenious experimenter injects into the bladder, or into a portion of the intestine of a living rabbit, a solution of

prussiate of potass, communicating with a copper wire; externally, he places a cloth wet with a solution of sulphate, communicating with an iron wire: these wires are put in contact with those of the pile. If the galvanic stream be directed from the exterior to the interior, by making a communication between the iron wire and the *positive* pole, and between that of copper and the *negative*, the tissues of the organs imbibe the Prussian blue: if the stream be changed, the colour appears on the cloth.

M. Fodéra injected into the left cavity of the thorax of a rabbit a solution of hydrocyanate of potass, and into the peritoneum a solution of sulphate of iron; he afterwards kept the animal placed on its left side for three quarters of an hour. At the end of this period the animal was opened, when he found that the whole of the tendinous part of the diaphragm had imbibed the blue matter: the muscular part was much less tinged, and only in isolated points. The sub-sternal lymphatic glands were likewise blue. The thoracic duct contained a bluish liquid: the peritoneal membrane of the stomach and duodenum was covered with spots of the same colour: they were observable, but in less number, on the rest of the digestive canal and on the arteries. The lymphatic ganglions of the mesentery, the suspensory ligament of the liver, the epiploon, were also tinged blue. Some small sub-peritoneal veins presented a slight blue coloration of the liquid contained in their interior. Twelve hours afterwards, the blue tint of these different parts was much more intense.

The progress of the coloration may be traced, and the phenomenon in some measure be seen in its different *phases*, by injecting a ferruretted solution of prussiate of potass into a portion of the intestine of a living animal; tying both ends, and plunging it into a bath containing sulphate of iron. At first a slight coloration, only, is observable in the parts, which gradually becomes deeper: afterwards the liquids of the lymphatics and of the blood-vessels become coloured in their turn. In the latter, the coloration begins by small ramifications, and afterwards extends to the branches, which are observed to be filled with intervals of blood and a blue liquid. In these experiments M. Fodéra discovered the presence of the prussiate of iron in the lymphatic vessels, in the thoracic duct, and, finally, in the portion of the inferior vena cava contained in the chest.

M. Fodéra concludes, from these different experiments, 1st, that exhalation and absorption take place by *transudation* and *imbibition*, and depend on the *capillarity* of the tissues; 2dly, that this double phenomenon may take place

in every part, and that the liquids imbibed may be conveyed equally well, either by the lymphatic vessels, or by the arterial or venous. But (the author very wisely adds) the phenomena of exhalation and absorption ought not to be considered as connected alone with imbibition and transudation: the modifications which they experience from the action of surrounding agents, from the nervous influence, the state of rest and motion, the energy of the circulation, the affinities of the substances with the tissues, the derangements produced by disease, and the elaboration which the fluids undergo whilst absorption and exhalation are taking place, ought likewise to be studied.

M. Fodéra endeavours to explain the increase of exhalation in the phlegmasiæ by the dilatation which the parietes of the capillary vessels experience; the interstices of the fibres which form these parietes become at such times increased, and, consequently, permit a more ready issue to the fluids: the serosity and the white globules, which are smaller than the red, are first effused; at last the red globules themselves occasionally escape. It will be seen that this mode of conceiving the phenomenon does not explain the infinite modifications, which the liquids exhaled into the inflamed parts undergo.

The author afterwards notices cases in which the lymphatics or thoracic duct have been said to contain different substances, which had been introduced either into the digestive canal, the serous cavities, or into the cellular tissue. If the effects of absorption are not manifested in the experiments, where a portion of intestine, containing poison, has no longer any communication with the rest of the body, except by a lymphatic vessel, we must seek for a cause in the extreme slowness of the circulation of the lymph. M. Fodéra inserted some liquid prussiate of potass in the subcutaneous cellular tissue of the thigh and abdomen of two young rabbits. In the first animal, at the expiration of a few minutes, and in the second, at the end of half an hour, he found it in the lymph of the thoracic duct, in the urine, the mucus of the intestines, the synovia, the serum of the blood, the serosity of the pericardium, of the pleura and of the peritoneum, as well as in all the solid parts, except in the crystalline, the cerebral substance, the interior of the nerves, and the osseous tissue. In another experiment the interior of the nerves presented traces of it.

Would not these experiments tend to prove that absorption in these cases had taken place at the same time, both by the lymphatics and blood-vessels?

As for absorption by the arteries, it can no longer be

doubted. In fact, tie the artery and mesenteric vein of a rabbit, immerse the portion of the intestine on which they are distributed into a warm solution of prussiate of potass, and inject into the interior of the vein a warm solution of sulphate of iron; you will observe in the liquid which flows from the artery previously incised, prussiate of potass, and in the solution in which the portion of intestine is immersed, sulphate of iron: so that, in this experiment, the artery absorbs, the vein exhales. If, therefore, in the experiments which have been hitherto made, liquids absorbed have only been found in the veins, it must have depended on the current which takes place from the arteries to the veins.

The experiments performed in England by Darwin, and more recently by Wollaston, Brande, and Marcet, tend to prove that different substances introduced into the stomach are found mixed with the urine, without having passed by the lymphatic or blood-vessels.

M. Fodéra has repeated these experiments, and made them undergo an ingenious modification, which has discovered to him phenomena unobserved by the English physiologists. He introduced into the bladder a plugged catheter, after having tied the penis in order to prevent the urine from flowing along the sides of the sound. He laid bare the œsophagus at the anterior part of the neck, and injected into the stomach a solution containing some grains of the ferru-retted hydrocyanate of potass. This being done, he frequently removed the plug, and received on filtering paper the urine which escaped. On this paper he dropped a solution of sulphate of iron, and added to it a little hydrochloric acid in order to destroy the colour. In one experiment the prussiate was detected in the urine ten minutes after its injection into the stomach, and in another five minutes afterwards. The animals were opened immediately. The salt was found in the serum of the blood taken from the thoracic portion of the vena cava inferior, in the right and left cavities of the heart, in the aorta, the thoracic duct, the mesenteric ganglions, the kidneys, the joints, and the mucous membrane of the bronchiæ.

This important experiment proves the extreme rapidity of absorption: it shows also that the prussiate of potass found in the urine, is conducted thither by the ordinary circulating ways.

The following experiment demonstrates the rapidity of pulmonary absorption in particular. M. Fodéra opened the thorax of a rabbit, and removed the heart, immediately after some prussiate of potass had been injected into the trachea. This operation was performed in twenty seconds: the in-

terior of the left auricle, however, presented a bluish green colour, which was more deep at the mitral valve, and less apparent in the aorta. The absorption, therefore, seems to take place at the very instant when the injection has penetrated into the subdivisions of the bronchiæ.

M. Andral's analysis is concluded by some eulogistic and well merited remarks on M. Fodéra's communications.

II.

Researches on the Pathological Anatomy of the Digestive Canal, considered in its Sub-diaphragmatic Portion. By M. ANDRAL, Jun. M.D.

(Continued from page 252.)

WHEN a perforation of the intestines supervenes in an individual labouring under typhus fever, with prostration of strength, and remarkable diminution of the general sensibility, it is not always easy to detect the peritonitis occasioned by it. In cases of this kind, in fact, we have seen the patient exhibit no signs of pain, even when the abdomen was strongly pressed upon, in any and every part. The sudden alteration of the features, the unusual tension of the belly, the change in the pulse, which becomes suddenly small and hard, may, at such times, cause us to suspect the existence of inflammation of the peritoneum : acute peritonitis, without pain, supervening on perforation of the stomach and occurring in fever, has been noticed by Morgagni.

Finally, we have seen peritonitis, occasioned by a solution of continuity in the parietes of the intestines, observe a chronic progress. A young man labouring under phthisis pulmonalis had had a copious diarrhoea for a long time : the abdomen had always been without pain. One day he complained of violent pain round the umbilicus ; pressure increased it : it was regarded as the product of the inflammation, of which the digestive tube was the seat : this continued incessantly, but not severely, during eight or ten days ; none of the other symptoms became aggravated in a remarkable manner : the patient suddenly felt his abdomen wetted by a tolerably large quantity of liquid, and perceived that a linear crack existed at the umbilicus : during the day an ascaris lumbricoides was discharged, along with a yellow liquid, similar to that commonly contained in the small intestines. Was it not reasonable to suppose that a portion of the intestine had been perforated ; that by the aid of partial adhesions contracted between it and the parietes of the abdomen, no effusion could take place into the peritoneum ; and that the abdominal parietes had, in their turn, become inflamed and perforated ? Was it not, in a word, a preternatural anus which had been formed ? On the following days, however, a small quantity of liquid continued to be discharged by the fistula ; the abdominal pain was somewhat intense. The patient, who had arrived at the last stage of pulmonary consumption, succumbed

twenty-seven days after the first appearance of pain, and about eighteen days after the formation of the fistula. The traces of a dreadful peritonitis were discovered. The intestines were united into one mass by black and very thick false membranes: a quantity of greenish liquid was effused between the folds of the intestines; it was there retained by membranous bands, which formed the parietes of a number of small cavities: no adhesion existed at the umbilical region: in the peritoneum two *ascarides lumbricoides* were found; their presence did not permit a doubt regarding the existence of an intestinal perforation, but the adhesions were so multiplied and so intimate, that it was impossible to discover it.

Stoll has related the case of a young man, who, after having laboured for six months under frequent vomiting and diarrhoea, was seized with violent pain in the abdomen after having taken cold: the twelve following days, he walked a considerable distance, each morning, in order to receive his medicine at the hospital; on the twelfth day he proceeded on foot as usual. The abdomen was tense and painful to the touch, countenance anxious and emaciated, pulse very frequent and small. He died in the evening, a short time after having himself given the preceding details. The peritoneum contained a bloody fluid, mixed with liquid stercoraceous matter. The ileum, not far from the cæcum, presented a hole sufficiently large to admit a filbert. The whole of the digestive tube was, moreover, inflamed.

There are some fortunate cases in which perforation of the intestine has not been followed by effusion into the peritoneum. Thus we have seen one of these perforations comprised between the two laminæ of the mesentery, out of the cavity of the serous membrane. We have also seen the spleen exactly applied upon the perforated stomach at its great *cul-de-sac*, without adhering to it, prevent any effusion. Professor Chaussier has observed some facts of this kind. Can we believe that, except in these rare cases, perforations of the digestive tube may take place during life, without consequent peritonitis? The anatomists who say they have observed this fact, may they not themselves have occasioned the perforation by pulling the intestinal tunics previously softened or deeply ulcerated?

Inflammation of the intestines may, like that of other parts, determine by suppuration and gangrene.

Suppuration is commonly established at the free surface of the mucous membrane; but in some more rare cases it is beneath it, in the meshes of the laminated tissue, that pus is formed, collects in *foyers*, and constitutes a sub-mucous abscess similar to the abscesses which frequently form in the tonsils. Similar purulent collections are extremely rare in the sub-diaphragmatic portion of the digestive tube. We have witnessed an example in the duodenum: at two fingers' breadth below the pylorus, a tumour projecting into the interior of the intestine, but not visible at the exterior, appeared; it was soft, fluctuating, and of the size and form of a cherry: the mucous coat, raised up and separated at this part, had preserved its white colour. On cutting into the tumour, a white inodorous liquid of the consistence of cream was

Discharged, which presented all the qualities of healthy pus. It was collected in the laminated tissue, the laminæ of which it had separated in such a manner, that the muscular membrane lay exposed below the collection.

We have several times observed in the lowest quarter of the ileum, beneath the mucous coat, when in a state of inflammation, small white maculæ of the size of a lentil, formed by a pearl-coloured liquid; changing its situation, and spreading *en nappe* when the mucous coat was pressed upon. It appeared as if some pus had been effused into the sub-mucous cellular tissue, which had occasioned the formation of a crowd of small *foyers*, in every part where the inflammation had been the most acute, or where the cellular tissue had yielded the most to distention. It is not uncommon to find, in the sub-arachnoidean cellular tissue, purulent collections, appearing like those of which we have just spoken, under the form of small white isolated maculæ, and, like them, capable of being displaced by pressure.

Authors have spoken much of *abscesses*, formed in the *stomach*, and having been discharged by vomiting. I have never witnessed a case of this kind.

Gangrene of the intestines, also, seems to us less common than has been for a long time imagined. Open the different works in which dissections are related, and you will find that their authors speak incessantly of *intestines gangrenous* and sphacelated in a great part of their extent; but unfortunately no one amongst them has described the lesion which he regarded as constituting a gangrenous condition. It is, at least, doubtful whether the brown colour of a more or less extensive portion of the mucous membrane, with softening of its tissue, should be considered as a sign of mortification. Of these derangements of the mucous coat we have already spoken.

There are diseases, as typhus fever, however, in which it is not uncommon to find on the internal surface of the digestive canal, real eschars, similar to those of the skin. Sometimes these eschars are formed at the expense of the laminated tissue which constitutes the face of the ulcerations: at such times it is found thickened, black, or rather of a dirty greyish colour, and of a putrescent consistence, like the *detritus* which exists at the surface of wounds struck with hospital gangrene.

Sometimes the mucous membrane itself, when inflamed, terminates in gangrene. An ulcer succeeds to the falling off of the eschar which results from it. It has appeared to us, that gangrene has tended to develop itself more frequently in the centre of the circumscribed and elevated patches of which we have spoken above. We have sometimes been able to trace, in the same subject, the formation of the eschars in the different *phases*. We observe, for example, at the end of the small intestine, oblong elevations of a brownish red, formed by the thickened mucous coat. In other places, a part of these elevations is changed into a hard tissue of a yellowish brown colour; repeated washing and long maceration cannot efface this tint. All those who have seen this morbid appearance, have not hesitated to compare it to the eschars, with which the surface of blisters is sometimes covered. The

gangrened portion, moreover, is already partly detached ; it no longer shows itself except in isolated points, in the interval of which ulcerations exist ; the base of these is sometimes white, sometimes of a deep brownish red, according as the cellular tissue which forms it has, or has not, participated in the inflammation. In some ulcerations, the eschar, detached in one portion, only adheres to their edge by a thin pedicle ; other ulcerations no longer present any trace of it. We have only once witnessed one of these eschars in the stomach : the end of the small intestine and the cæcum are their most common seat. Almost every time we have met with them, their formation has seemed to have coincided during life with the mortification of blisters. Were it not wandering from our subject, we might deduce some important considerations from these facts, both on the nature of the disease, and on the mode of treatment proper for it. These we shall make the subject of another work.

We have now passed in review the anatomical characters of inflammation of the digestive tube ; the lesions which it presents appeared to us sufficiently distinct, to enable us to establish three stages of this inflammation, in the same manner as M. Laënnec has established three stages in pneumonia, according to the different states of the lung. In the first stage there is simply a more or less strong injection of the mucous coat. The second stage is marked by alteration of its texture, whether it be thickened, softened, or exanthematous. This alteration may, or may not, extend to the other tunics. In the third stage the mucous and subjacent tissues become disorganized and ulcerated.

The second and third stages can never be mistaken ; but not so with the first. In the same manner as sero-sanguineous engorgement of the lungs, supervening, only, during the latter periods of life, may be easily confounded with the first stage of pneumonia ; so may the mechanical atasis of the blood in the mucous coat of the digestive organs or beneath it, be mistaken for an inflammation of these parts. We shall endeavour to offer some considerations which may prevent us from committing a similar error. Whenever, some hours previous to death, the return of the venous blood towards the right cavities of the heart, has experienced a considerable interruption, the parietes of the intestinal canal are found more or less strongly injected in several parts. The obstacle to the return of the blood towards the heart may be seated either in the heart itself or in the lungs. In each case, the blood, which no longer penetrates these two organs but with difficulty, reflows towards the liver, which becomes engorged in its turn, and is no longer able to admit that which is brought to it by the vena portæ. The ramifications of this vein therefore remain filled ; they receive at the same time a fresh quantity by the arteries until death, and sometimes even after death. Hence proceeds the injection of the parietes of the intestinal canal ; this injection is more lively and more common than that of any other part, either in consequence of the number and size of the vessels, or owing to the presence of the liver, into which the greatest part of the blood received by the right side of the heart, even that which is brought to it by the vena cava superior, reflows and

accumulates as in a reservoir. If, in fact, as we have seen done by M. Magendie, we inject sulphuric acid into the jugular vein of a living animal, the hepatic vessels are found filled with coagulated blood. It is only when the engorgement of the right side of the heart and of the liver has reached a very high degree, that the other parts are found also injected with blood after death. At such times the skin is marbled with livid streaks; the cerebral membranes are of an intense red; the brain itself is covered with an infinite number of small red points: an enormous quantity of blood streams out from all the parenchymatous tissues; the inter-muscular, sub-serous, and sub-arterial, cellular tissues, are overrun by a multitude of small vascular ramifications, &c.

But the purely mechanical injection of the intestinal parietes itself presents several degrees.

In its mildest degree, the laminated tissue underneath the mucous coat is found overrun by large veins filled with black blood: they give to the stomach, when viewed internally, a marbled appearance: in the intestines they form, by their multiplied anastomoses, numerous arborisations; they exist, in great quantities, in the folds of the small intestines, which, being deeply situated in the hollow of the small pelvis, present, owing to their inclined position, a fresh obstacle to the return of the blood.

This first degree, which consists in an injection of the great vessels of the sub-mucous tissue, must not be confounded with the inflammatory injection which is seated in the vessels of the mucous membrane.

But in a second degree, besides these veins gorged with blood, the laminated tissue presents a crowd of small vascular ramifications which extend in several parts to the mucous coat: at such times this membrane presents, at greater or less intervals, patches of a brownish red, formed by the agglomeration of several almost capillary vessels, strongly injected. When less numerous, they form, in the mucous coat, small red isolated or united points: when more multiplied, they produce long, red, or brown bands.

Sometimes, sanguineous infiltration, true ecchymoses, with or without injection of the mucous coat, are discovered in the laminated membrane.

Finally, in the highest degree of this mechanical injection, the mucous coat exhales blood at its free surface: this we have witnessed in several subjects. Boërhaave had already observed that when the blood which returns from the intestines cannot pass through the vena portæ, owing to its being obstructed, it flows into the intestines.

This sanguineous exhalation, joined with the interruption of the circulation, is equally observed in other parts. The tissue of the lung, the cerebral substance, the parts of the skin deprived of epidermis, become sometimes its seat in individuals labouring under aneurism of the heart. The bronchiæ are often filled with a bloody fluid during the last moments of the life of consumptive individuals, who have experienced a long agony.

These phenomena, exhibited to us on the inspection of the dead

body, experience may produce on living animals. By slowly depriving them of life, we see their digestive tube, which is pale or of a rosy white in the ordinary state, becomes injected and strongly reddened. An intense coloration of the intestines may be also obtained by tying the trunk of the vena portæ. This fact was known in the time of Morgagni: he relates, that after the ligature of this vein, the intestines quickly acquire the colour of cochineal, and that a sanguineous exhalation sometimes takes place at their internal surface.

From the whole of the preceding facts, it results that, when any stimulus affecting the intestines has only occasioned their injection, without having yet altered their texture, it is often difficult, and sometimes impossible, to distinguish this inflammatory injection from one which has been purely mechanical. It is necessary, therefore, to attend either to the symptoms which preceded death, or even to the kind of death; to observe the state of the lungs, of the right heart, of the liver, and of the system of the vena portæ: finally, in some cases we must be compelled still to remain in doubt.

ARTICLE II. *Adventitious Tissues.—Tubercles.*—We seek in vain, in ancient authors, for an exact description of the tubercles which develop themselves in the parietes of the digestive tube. They have all, at most, been indicated in a vague manner by some. Thus, Bartholin says he found the intestine full of purulent tubercles in an individual labouring under chronic dysentery. Bonet appears to have spoken of them under the name of apostemata. Brunner seems to have regarded them as mucous follicles preternaturally developed. It is somewhat astonishing that they should not have fixed the attention of Morgagni.

Intestinal tubercles are, in fact, one of the most common affections. They exist in the majority of individuals labouring under phthisis pulmonalis. In the majority of cases they only supervene consecutively on the tuberculous degeneration of the lungs: at other times they precede it, and drag the patient to the grave, before any symptom has declared itself in the chest. It is very rare to meet with tubercles in the intestines of individuals whose lungs contain none of them. Of all the parts of the digestive tube, the end of the jejunum and the ileum are those in which tubercles most frequently develop themselves. We have much less frequently met with them in the commencement of the first of these intestines, as well as in the duodenum. More rarely still are they observed in the cæcum, and in the ascending and transverse colon. We have never found them in the other portions of the large intestine: we once only met with an isolated tubercle in the stomach.

Tubercles constantly arise in the midst of the cellular layers which unite together the different coats of the intestine. Rarely existing in the sub-peritoneal cellular tissue, they show themselves most commonly in the midst of the meshes (*mailles*) of the sub-mucous cellular tissue. At their origin, they appear under the form of white points, having scarcely the volume of the head of a small pin. They are perceptible through the mucous membrane, which above them has preserved its healthy state. They become gradually enlarged, and

finally acquire the size of a pea. We have never seen them of a larger size. Under such circumstances, they appear under the form of small round masses, of a dull white, generally isolated from each other, and very rarely agglomerated, like pulmonary tubercles. They project beneath the mucous membrane, which they raise up. The internal surface of the intestine around them is most commonly pale or somewhat injected.

By gently passing above them the blade of a scalpel, the mucous coat which covers them may be elevated, issue is given to the tuberculous matter; and in the place which it occupied, a small cavity exists, with white, elevated, and round edges, perfectly similar to an ulceration. Sometimes, in the whole extent of the canal, no other lesions are discoverable than those tubercles, such as we have just described them; they are then in their state of crudity. But in the majority of instances, there exist, at the same time, ulcerations of various forms and sizes, at the base of which the debris of tuberculous matter is often discovered. A perfect analogy seems to us to exist between the formation of these ulcerations and that of tuberculous ulcerations of the lungs. In the midst of the parenchyma of the lungs, as well as the intestinal mucous coat, tubercles at first develop themselves, without the tissue surrounding them seeming in any manner inflamed. In the lung, as in the intestine, we frequently see these tubercles exist in the part of this organ which is not inflamed; whilst the parts where we do not meet with them present evident signs of recent or chronic inflammation. To this it may be objected, that where the tubercles are developed a previous inflammation had existed, which, having disappeared in time, had left no other trace than the presence of the tuberculous matter. But this can only be a supposition.

In the lung, as in the intestinal canal, tubercles, in proportion as they become soft, occasion either the erosion and complete destruction of the parietes of the bronchiæ with which they are in contact, or of the digestive mucous coat below which they have taken birth, and eat a route outwardly. At such times, in the parenchyma of the lung, as at the internal surface of the intestine, a cavity exists, the parietes of which become inflamed, and secrete a purulent matter, the quality and quantity of which are very variable. We have frequently witnessed in intestines full of tubercles, ulcerations which had a very great resemblance to pulmonary vomices; like the latter, they represented anfractuous cavities, separated by bands of an irregular form.

In some cases, at the same time that the tubercles raise up the mucous membrane which they tend to destroy, they develop themselves also on the side of the muscular coat; separate its fibres, and come in contact with the peritoneum, which, in the same manner as the mucous coat, ends in becoming destroyed. Hence results a solution of continuity of the intestinal parietes, which remains sometimes filled up for a greater or less time by a tuberculous mass. We have observed a similar disposition.

We have just seen that tubercles may arise and develop themselves

without previous inflammation, but we frequently also observe traces of an intense inflammation in the portion of intestine where they exist. It is not rare, for example, to find the base and edges of intestinal ulcerations, in individuals labouring under chronic diarrhœa, sprinkled with tubercles still crude. It even seems that inflammation favours their development; and it is almost solely in this case that they are found pressed and agglomerated together.

If we now consider intestinal tubercles as regards the symptoms which announce them, we shall again find several points of relation between them and pulmonary tubercles. Like the latter, they may, when not numerous, exist a long time without any symptom occurring to lead us to suspect their existence. Thus we have found the intestinal mucous membrane raised up by tubercles still small, and a little numerous, in phthisical subjects who have never had diarrhœa: other individuals, whose intestines are in a similar state, have not constantly diarrhœa, but in them it manifests itself under the influence of the slightest cause: exposure to cold or humidity, and the least error in regimen, produce it. It is thus that the pulmonary mucous membrane is very easily irritated in persons whose lungs contain a small quantity of tubercles still crude. But these multiplied irritations hasten, in their turn, the discharge of the tuberculous matter either into the lungs or intestines. The diarrhœa does not appear to become considerable and permanent until ulcerations have succeeded to the softening of the tubercles. The formation and development of intestinal tubercles are generally accompanied with very little pain: it is the same also with the ulcerations which succeed them. Many patients affirm that they have never experienced any abdominal pain: others feel from time to time slight and very supportable colics. Some, however, do complain of tolerably severe pain. After death, no lesion is discoverable capable of explaining these differences.

We have sometimes observed, in different portions of the small intestines, miliary granulations similar to those which develop themselves in the parenchyma of the lungs. On passing the finger over the internal surface of the intestine, we find a crowd of small rough bodies of the size of a millet seed. Their transparency, their, as it were, cartilaginous hardness, distinguish them from tubercles properly so called, which are soft and opaque. Moreover, they are developed in the tissue of the mucous coat, and not below it like the tubercles, as it is easy to verify by detaching that membrane: they come away with it.

(To be concluded in our next.)

PART IV.

MEDICAL AND PHYSICAL
INTELLIGENCE:

BRITISH AND FOREIGN.

On the Preparation of the Acetate of Morphia. By FREDERICK
JOYCE, Chemist.

HAVING lately seen much benefit derived in substituting the acetate of morphia for the tinctura opii of the London Pharmacopœia, and as I think it would prove of considerable utility, if generally adopted, I am induced to state the following mode of preparation, which, from several experiments I have lately made, I find to be the most economical, and to answer sufficiently every purpose of a more expensive process.

Five ounces of good dry opium, broken small, are to be put into a covered vessel with from one quart to three pints of water, and gently boiled until the whole of the soluble matter appears to be taken up. Pass it while still hot through a fine strainer, and, having poured a small quantity of boiling water on the residue, and having strained and mixed the liquors, add so much calcined magnesia that, when boiled for a few minutes, the supernatant liquor shall have entirely lost its bitter taste: the whole is then to be poured on a filter, and the magnesian precipitate collected and dried, which having been put into a retort, pour upon it one quart of alcohol, and apply a gentle heat to bring it to ebullition, at which state it may be of advantage to keep it for a few minutes, in order to entirely dissolve every portion of the morphia. The solution is now to be passed, as quickly as possible, through a filter, the residue is to be washed with a little hot alcohol, and the filtered liquors are to be mixed; return them into a clean retort, and draw off about one half of the spirit. The contents of the retort are now suffered to cool, when the greater part of the morphia (perfectly pure, with the exception of colouring matter) will be found crystallized on the bottom and sides of the glass. Acetic acid, to saturation, being now added, the process is to be finished with a sufficient quantity of distilled water to make exactly one quart.

It will be seen, by turning to the Pharmacopœia, that, in this formula, the quantity of opium is doubled. It is, however, of no consequence, as the medical Practitioner can, at any time, add either distilled water or proof spirit, and by that means bring it to the strength ordered by the college. In either of these states it will be found to possess every advantage that is derived from opium, without producing the disagreeable headache generally attending the use of the common laudanum.

As this method may be objected to as not making a perfectly pure acetate, the colouring matter may be removed by recrystallizing the morphia previous to its solution in acetic acid, or afterwards by the use of well-burnt animal charcoal, previously digested in muriatic acid: but as the loss in strength by either of these methods is often considerable, and colour in medicine being of very little moment, this additional purification would, in general, be found an evil. It is also, perhaps, necessary to observe, that whenever a solution of morphia in alcohol is to be filtered, it should be kept warm; otherwise the salt deposits on the filter, and the

product is lost. The method I find to answer best, is to have a double copper funnel connected at the pipe, and the space between the two filled with boiling water. In this manner the whole of the fluid in the inner funnel is kept hot until it has passed through the filter; it is also furnished with a cover, which fits air-tight, in the middle of which is inserted a long-necked funnel, which reaches nearly to the bottom of the filter, and by which means it is refilled without removing the cover. This little apparatus is extremely useful for solutions in ether, the outer space being in this case filled with a freezing mixture.

I. *Cases of Poisoning by the Ceanothe Crocata (the Hemlock Dropwort).*
By Drs. BRY and REVEILLÉ-PARISE.

CASE I. — M. Bry, of Angers, has communicated to the Society of Medicine of Paris a case of poisoning by the *ceanthe crocata*. An individual, aged forty, in perfect health, partook of the root of this plant, mistaking it for the other species of the same genus, which are edible. He had taken a piece as large as his finger. A few minutes afterwards he complained of a great heat in the throat and œsophagus; and within half an hour he lost his speech, fell into a state of insensibility, afterwards into violent convulsions, which continued for three hours and terminated in death within the space of four hours from the ingestion of the root, without it having been possible to render him any assistance, owing to the firmly clenched state of his teeth. The body, which was not allowed to be inspected, exhaled a very disagreeable odour fifteen hours after death. The parts of generation were, at that period, of a violet colour; the colour of the rest of the surface was unchanged.

CASES II.—VI. — Dr. Reveillé-Parise, in the month of October, 1810, when at Alcaniz, in Arragon, with the regiment to which he was then Surgeon, was called to five soldiers who were affected with symptoms of poisoning, after having, during a meal, partaken of a salad collected by themselves. Amid the remains of the salad which fortunately remained, M. Reveillé-Parise readily recognized the leaves and roots of the *ceanthe crocata*, which is common in that part of Spain. All these persons experienced, soon after, a burning heat in the throat, and symptoms similar to those mentioned in the foregoing case. Emetics were immediately administered to all. Three out of the five died in the space of from three to four hours; the other two recovered.

Dissection was performed, and a *procès-verbal* returned. No traces of inflammation could be detected in the mucous coat of the stomach or intestines: this membrane was apparently sound throughout these viscera. A slight redness was perceptible in the fauces. It does not appear from the author's account that the head was opened.

The roots of the *ceanthe peucedanifolia* and *pimpinelloïdes* are used in the south of France and in Spain as articles of food. The *crocata*, from its resemblance to these, may be mistaken for them: it therefore becomes a matter of importance to attend to the best means of remedying such an occurrence. The celerity with which death supervenes after the ingestion of this substance requires that the measures should be prompt and active. The treatment should be emetics, and antinarcotic remedies: these should be introduced into the stomach by means of a flexible tube passed through the nose, when the trismus prevents the administration of medicines. — *Journ. Génér. Janv. et Mars, 1823.*

II. *On the Vermifuge Properties of Samphire (Crithmum Maritimum).*
By Dr. LAVINI.

Dr. Lavini has published, in the twenty-fifth volume of the *Memoirs* of the Academy of Sciences of Turin, chemical and medical researches on the *crithmum maritimum*. He attributes to this plant very active vermifuge

powers, especially in cases of the lumbrici. He prescribes internally either the expressed juice or its volatile oil, in the form of an *oleosaccharum*, given in a little water or in any other vehicle; and externally, a cataplasm of the bruised leaves laid upon the epigastric region, while the volatile oil is kept at the nostrils.

The different experiments of M. Lavini with this plant lead him to conclude:— 1st, That, whenever it is to be used in medicine, its juice ought to be simply expressed, without heat, that it may not be deprived of its green, mucous, and aromatic matter, which appears to contain its active principle. 2d, That the hydrochlorates, the sulphates, the carbonates of the earths and potash, with the acetic acid and a small portion of silica, appear to be constituents of the plant. 3d, That it contains a free acetic acid and a peculiar extractive substance. 4th, That its distilled water produces no action on the animal economy. 5th, That the action of sulphuric acid converts its volatile oil into a substance resembling petroleum. 6th, That the hydrates of potassa and soda do not form soaps with its essential oil. 7th, That this oil is in many points analogous to petroleum; and, 8th, That the plant seems to be an excellent vermifuge.—*Archives Gen. Med.* 1823.

III. Discovery of the Condensation of the Gases. By Mr. FARADAY.

This very enterprising chemist has very lately discovered, as the result of some extremely interesting experiments made by him in the laboratory of the Royal Institution, that *chlorine* and *muriatic acid* may be obtained in the liquid form. By pursuing the same mode of experimenting, *sulphuretted hydrogen*, *sulphurous acid*, *carbonic acid*, *cyanogen*, *enchlorine*, and *nitrous oxide*, have been all found to assume the liquid form under pressure, and to appear as limpid and highly mobile fluids. "It is probable that other gases may be condensed by similar means," and that nitrogen, oxygen, and even hydrogen itself, may be changed into fluids, provided sufficient pressure can be commanded. "Some of Mr. Perkins's experiments render it more than probable that atmospheric air, under a pressure of several hundred atmospheres, changes its form; and it is not unlikely, that some curious and interesting results may be obtained by the aid of a slight modification of the apparatus used by that gentleman in his researches with high pressure steam."

IV. On the Absorption and Exhalation of Azote during Respiration.

Dr. Edwards, who is well known as an intelligent physiologist, concludes, from different experiments, and from the circumstance of the opposite results which they give, some indicating a diminution of the azote of the air, others an increase of it during respiration, that this gas is absorbed into the circulation, and afterwards discharged from it; and that each of these actions is regulated by the constitution, habit, and circumstances of the individual, and by the influences to which he may be subjected, the absorption being to a small extent, while the exhalation is considerable, and *vice versa*. This subject will come under a fuller consideration in our next premium.—*Journal de Phys.* Jan. 1823.

V. The State of the Venous Trunks in Serous Infiltrations of the Extremities.

M. Bouillaud has observed, in several cases of infiltration of the lower extremities, the venous trunks, after entering the pelvis, quite impermeable, and filled by a concrete and organized coagulum. In the case of a female, who died from chronic peritonitis and scirrhus of both ovaria, with immense infiltration of both the lower limbs, the veins, near their opening into the cava, were, in a manner, obliterated by the pressure of the diseased ovaria, and completely filled, from their junction with the cava, with a carnified

and friable coagulum. In another female, aged 38, who, soon after her confinement, had great œdema of her left lower extremity, and who some time afterwards died, on dissection the veins of that limb were found to be filled with a similar coagulum to that of former case, which extended to the vena cava. The other veins were in their usual state. The iliac portion of the colon was distended with a large mass of indurated faeces, which pressed on the adjoining veins, and gave rise to their impervious state, and to the infiltration of the limb. These observations were made in a Parisian hospital.—*Journal de Phys.*, Jan., 1823.

VI. *Case of Poisoning by the Solanum Dulcamara.* By Dr. SCHLEGEL, of Meiningen.

A young man, aged 19, having taken for some time a decoction of the dulcamara for a chronic cutaneous eruption, wished to increase its efficacy by adding to it an ounce of the extract. After having taken this quantity, within the space of twenty-four hours, he was seized with defect of sight, vertigo, a trembling of all the limbs; and afterwards with paralysis of the tongue, and cold sweats. As soon as Dr. Schlegel was made acquainted with the source of the mischief, he ordered fifteen drops of a very concentrated solution of the carbonate of potash, in a little water, which was repeated every half hour for the space of twenty-four hours, when all the symptoms of poisoning disappeared.—*Hufeland's Journ.* 1822.

VII. *The Adulteration of Cubebs Powder.*

A correspondent informs us, that, owing to the scarcity and the consequent high price of cubebs, this medicine is frequently adulterated with *pimento*, to the extent of about one-third. As, however, the aromatic odour of the pimento predominates over that of the cubebs, it may be thus detected. It is to be feared that the detection of one alloy merely leads to the substitution of another; and it is much to be regretted that public censure is the only punishment that can be inflicted on the perpetrators of this most shameful and most deleterious kind of fraud.

VIII. *Extraordinary Proportion of Cancerous and other Malignant Tumours in a circumscribed District.*

The cause of the local prevalence of particular diseases is frequently unknown, and, when such is the case, it is only by an aggregation of well attested facts that we can arrive at it. The following curious remark has been made by a medical Practitioner in Sussex:—

In the compass of about ten miles, in the neighbourhood of Tunbridge Wells, there have occurred more numerous cases of cancer, chronic deafness, and the whole train of head diseases, than has been observed in any other district of the same size in England. The writer of this article remembers nine cases of cancer in the small parish of Hartfield within three years, the whole population being barely 600 persons. The common people hereabouts feed very unwholesomely, and eat a large portion of pork and other gross animal food.

IX. *Combination of Alcohol with Oil of Turpentine.*

M. Vauquelin has found, that if one hundred parts, in volume, of volatile oil of turpentine, and twenty parts of alcohol, are mixed together, they are not separable by rest, but form a homogeneous body, an effect which arises from a solution of the alcohol in the oil. This compound does not become turbid by the addition of water.—*Ann. de Chim.* Vol. XIX. p. 279.

X. *A Letter from Mr. LISTON to the Editors.*

A statement by a Mr. Home, in regard to a case of cystitis, which I published in a former Number of your Journal, has just now been pointed

me in that for March. I am there accused of having made statements and misrepresentations. If any such do occur, I may be to say that they are not wilful. The account of the previous part of the case was drawn up from the information furnished by me and his friends; and my statement bears expressly, that *such source of my information*. It is well known that I could have sworn. Whether the Practitioner or patient had the greatest interest in a case, in glossing over or giving any other than a genuine account of a matter, I leave the Profession to determine. Mr. H. is designated Surgeon of the Royal Infirmary of Edinburgh. Now, it is my duty to caution you and your readers on this point. In general, young men of medicine fill that office before they have finished their education, and without any qualification to practise; and in this respect they are on a level footing indeed from the respectable House Surgeons of some of our hospitals. In short, in this business, an unknown young man is forward, to make averments and use language which it is well known his principals have not dared to employ.

15, 1823.

I am, Gentlemen, &c.

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

An Exposition of the Principles of Pathology, and of the Treatment of Diseases. By Daniel Pring, M.D., Member of the Royal College of Surgeons, London. 8vo. Pp. 522. London, 1823.

This is a work of great merit. We now merely introduce it, and recommend, to the attentive perusal of our readers, without anticipating what we shall have to say respecting it, on a future occasion.

The Elements of Pharmacy and of the Chemical History of the Materia Medica: containing an Explanation of the Chemical Properties of the London Pharmacopœia on the different Theories received and sent; the Chemical Properties of the various Articles of the Materia Medica of the London College, and of other Drugs that have been lately introduced into Practice; a Description of the most improved Furnaces actually used in the Practice of Experimental and Manufacturing Chemistry; illustrated by Figures. The whole intended as a Companion to the Author's Treatise on Pharmacology. Samuel Frederick Gray, Lecturer on Materia Medica, Botany, and Pharmaceutical Chemistry. 8vo. Pp. 340. London, 1823.

This work will be found a most useful assistant not only to the pharmaceutical and chemical student, but also to those who are engaged in the practice of these branches of science.

A Treatise on Indigestion and its Consequences, called Bilious and Bilious Complaints; with Observations on the Organic Changes in which they sometimes terminate. By A. P. W. Philip, M.D., F.R.S. Ed., &c. Third edition, with some additional Observations. 8vo. Pp. 409. London, 1823.

These observations which have been added to the present edition of this excellent work relate principally to dyspeptic phthisis and to the effects of opium.

FOREIGN.

I. *Chirurgie Clinique de Montpellier, ou Observations et Réflexions tirées des Travaux de Chirurgie Clinique de cette Ecole.* Par le Professeur Delpech, Conseiller Chirurgien Ordinaire du Roi; Professeur de Chirurgie Clinique en la Faculté de Médecine de Montpellier; Chirurgien en Chef de l'Hôpital St. Eloi; Membre Correspondant de l'Institut Royal de France, de l'Académie Royale de Médecine de Paris, &c. &c. Tome Premier. 4to. Pp. 500. Paris et Mont., 1823.

This is a splendid volume, by a scientific Surgeon. It embraces some of the most important subjects in practical surgery, namely—1st, on tying the principal arteries; 2d, observations on the deformity called *pieds-bots*—club-feet, or malformation of the foot and ankle; 3d, on fractures of the humerus; and, 4th, considerations on venereal diseases. The first of these shows the extent to which the French is indebted to British surgery, in the treatment of diseases of the arteries. The second contains some excellent observations on the nature and treatment of a species of congenital lameness, which has been wonderfully neglected by modern Surgeons, especially when it is considered that every member of the body has been laid hold of, as a subject of exclusive investigation, by which professional éclat may be achieved. The observations on venereal diseases are full and interesting. M. Delpech views these disorders in all their relations and complications. This volume is illustrated by sixteen plates. M. D. purposes to continue the publication of additional volumes, as his materials accumulate, which are already extensive.

II. *Recherches sur la Contagion de la Fièvre Jaune, ou Rapprochement des Faits et des Raisonnemens les plus propres à éclairer cette Question.* Par J. D. Brouneau et Eug. Sulpicy, Docteurs en Médecine de la Faculté de Paris. 8vo. Pp. 480. Paris, 1823.

This is a work by two young Physicians who have had no personal experience of yellow fever, but who examine the evidence respecting its contagious or non-contagious properties with great candour and research. They conclude that there is no satisfactory evidence that yellow fever has been imported into a temperate climate; and, while they admit the difficulties attendant on the examination of the question as to its contagious properties, they arrive at the conclusion that it is not strictly a contagious disease; and that the arguments and proofs, for and against its contagious nature, have rested on the sense which has been generally, but improperly, attached to the words contagion, infection, and epidemic.

WORKS RECEIVED FOR REVIEW.

I. *A Treatise on Dislocations, and on Fractures of the Joints.* By Sir Astley Cooper, Bart., F.R.S., Surgeon to the King, &c. &c. Second edition. With thirty plates. 4to. Pp. 592. Longman. 1823.

II. *An Exposition of the Principles of Pathology and the Treatment of Diseases.* By Daniel Pring, M.D., Member of the Royal College of Surgeons, London. 8vo. Pp. 520. Underwoods. 1823.

III. *The Elements of Pharmacy, and of the Chemical History of the Materia Medica.* By Samuel Frederick Gray, Lecturer on *Materia Medica*, &c. 8vo. Pp. 340. Underwoods. 1823.

IV. *Elements of the Theory and Practice of Physic, designed for the Use*

of Students. By George Gregory, M.D., Licentiate of the Royal College of Physicians, London, Member of the Medical and Chirurgical Society, Physician to the Small-pox and Vaccination Hospital, and Senior Physician to St. George's and St. James's Dispensary. In 2 vols. Vol. II. 8vo. Pp. 450. Burgess and Hill. 1823.

LITERARY INTELLIGENCE.

Dr. Gordon Smith has in the press a new edition of the Principles of Forensic Medicine, which will contain much additional matter. The volume will embrace every topic on which the medical Practitioner is liable to be called to give a professional opinion in aid of judiciary inquiries.

Dr. Forster is about to publish, Illustrations of the Mode of maintaining Health, curing Diseases, and protracting Longevity, by attention to the state of the Digestive Organs; with popular Observations on the Influence of Peculiarities of Air, of Diet, and of Exercise, on the Human System. In 1 vol. 8vo.

Mr. Earle has in the press a work, containing — 1st, Practical Remarks on Fractures at the Upper Part of the Thigh, and particularly Fractures within the Capsular Ligament; with critical Observations on Sir Astley Cooper's Treatise on that subject, and a Description of a Bed for the Relief of Patients suffering under these Accidents and other Injuries, and Diseases which require a state of permanent Rest. — 2d, Observations on Fractures of the Olecranon. — 3d, Description of a new Apparatus for more effectually Securing the Upper Extremity in cases of complicated Injury of the Shoulder-joint and Scapula. — 4th, On the Re-establishment of a Canal in the place of a large Portion of the Urethra which had been destroyed. — 5th, On the Mechanism of the Spine.

Mr. Donovan proceeds regularly with his New Monthly Miscellany of Exotic Natural History, entitled the Naturalist's Repository: the Twelfth Number, which completed the First Volume, was published in due succession: the Thirteenth, or First Number of the Second Volume, has just appeared. Price 3s. 6d. each Number. — The design of this work is to illustrate, in a pleasing and appropriate manner, the most beautiful, scarce, and curious objects of Natural History, in every department of nature, that have recently been discovered in various parts of the world, and more especially such novelties as, from their extreme rarity, remain entirely undescribed, or have not been duly noticed by any preceding Naturalist. The descriptions, which are calculated for the scientific as well as general reader, are throughout accompanied with coloured plates of great beauty and fidelity.

GAS LIGHTING. — In the press, and speedily will be published, a second edition of the Theory and Practice of Gas Lighting, by T. S. Peckston. — In this edition the author has considerably abridged the theoretical part of the work as given in the first edition; and to render it as useful as possible to every practical man, there is introduced much original matter relative to coal gas, and an entirely new treatise on the economy of the gases obtained for illuminating purposes from oil, turf, &c.

It is well known that the nerves of the uterus have hitherto evaded all the researches of Anatomists. Dr. Tiedemann, a celebrated German Physician at Heidelberg, has, however, been fortunate enough to detect their origin and course, and has just communicated this important discovery to the Profession, in a work, entitled *Tabula Nervorum Uteri*. It is printed in the largest folio size, and contains two highly finished engravings on copper, and two outline lithographic prints, after designs from nature, by Professor Roux.

THE METEOROLOGICAL JOURNAL,
From the 19th MARCH, to the 20th APRIL, 1823,
 By Messrs. HARRIS and Co.
Mathematical Instrument Makers, 50, High Holborn.

March.	Moon.	Rain Gauge.			Therm.		Barom.		De Lac's Hygrom.		Winds.		Atmo. Variation		
		9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	9 P. M.	10 P. M.
20		33	40	43	29	58	29	32	76	85	SW v.	WSW	Sno.	Rain	Clo.
21		45	53	38	29	22	29	13	92	90	SW	SW	Rain	Sno.	Clo.
22		40	50	36	28	93	29	14	85	85	SW	SSW	ovc.	Fair	
23	38	39	51	35	29	31	29	75	83	90	WNW	NNE	Fair	Fine	
24		38	47	33	30	09	30	13	90	81	NNW	NNE	Fine		ovc.
25		36	46	40	30	08	30	02	89	86	E	E	Fog	Fair	
26	☉	42	50	43	29	93	29	88	94	79	NE	ENE	Fog	Fair	
27		45	47	40	30	00	29	80	83	88	E	SSE	Fair	Fine	Clo.
28		45	46	39	29	80	29	83	90	88	ESE	E	Fog	Fine	Fog
29		41	45	37	29	85	29	81	89	94	ENE	E	ovc.	Fair	ovc.
30		40	55	42	29	80	29	74	90	87	SE	WSW	Fair	Fine	Rain
31	11	41	56	44	29	93	29	95	89	90	W	WSW	Fine		Clo.
1		50	62	49	29	90	29	81	65	80	WNW	WSW	Fine		
2		50	60	50	29	75	29	53	76	70	WSW	WSW	Fine		
3	☾	51	60	46	29	61	29	50	80	86	SW	SW	Fine	Sho.	
4		44	54	41	29	03	28	96	75	71	S	SSW	Rain		
5		43	57	43	28	90	28	92	80	83	W	WSW	Sno.	Rain	Clo.
6		45	57	42	29	13	29	38	85	82	W	NNW	ovc.	Clo.	
7		45	50	38	29	52	29	62	83	89	NNE	E	Rain		ovc.
8	89	41	47	37	29	68	29	64	90	87	NE	NE	Fair	Fine	Clo.
9		39	48	38	29	69	29	75	78	80	NE	ENE	Clo.	Fine	
10		43	50	41	29	88	29	87	86	85	ENE	ESE	Fine		
11	☾	43	54	36	30	01	30	08	75	76	E	E	Fine		
12		41	47	35	30	00	29	98	66	77	SE v.	SE v.	Fine		
13		39	48	37	29	93	29	90	66	71	ENE	SE	Fair		
14		43	55	40	29	92	30	01	71	80	E var.	E var.	Fair		
15		43	60	45	30	10	30	13	79	75	SW v.	WSW	Fair		
16		47	63	45	29	91	29	85	83	90	SW	WSW	Fine		Clo.
17		50	63	45	29	74	29	67	70	72	SW	W var.	Fine		Clo.
18	☾	49	55	38	29	47	29	31	70	72	NNW	NW v.	Fine	h.&r.	Fine
19	06	41	58	39	29	41	29	47	63	72	WNW	W var.	Fine	h.&sh.	Fine

The quantity of rain fallen in the month of March was 1 in. 16-100ths.

NOTICE TO CORRESPONDENTS.

Communications have been received from Sir Andrew Halliday, Dr. H. Davies, Mr. Callaway, Mr. Painter, and Mr. E. Thompson.

. Communications are requested to be addressed (post paid) to
 Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 114. JUNE 1, 1823. VOL. XIX.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Case of Melanosis. Communicated by Sir ANDREW HALL-
DAY, Physician to His Royal Highness the Duke of
Clarence.

JOHN HOWSTON, ætatis fifty-one, March 18th, complains of pain of the breast and both hypochondriac regions, increased on pressure, full inspiration, and coughing. The pain of the hypochondriac regions darts to his shoulder when he lies on his right side; pains severe also in lumbar region, and increased on pressure and when he moves in bed. Is much affected with cough when he lies on his left side. Expectoration difficult. Pulse 108. Sputum thick, and in small quantity. Tongue clean. Headach. Heat 101. Has some difficulty in passing his urine. Bowels very constipated. Was attacked about five weeks ago with pains of knees, which left him about a fortnight after; and the above symptoms came on since that time, and have continued the same. He has taken some medicines, but without relief. — Statim sit venesectio ad ʒxvj.; capiat bolum ex submuriate hydrarg. c. jalapa, et cras mane sulphatis magnesiae, ʒj.

19th. — Bled to ʒxvj. (blood not sisy), with relief of pain and increase of weakness of pulse. He passed a bad night.

Cough, difficulty of expectoration, and pain of the right side, continue. Three dejections from the cathartic. Pulse 92, natural. Heat 94. — Applicatur statim epispasticum lateri sinistro; inhalatio vapores aquæ.

R Misturæ Mucilaginosæ, ℥viij.

Tincturæ Opii Camph., ℥ss. M.

Capiat 3j. sæpies urgenti tusse.

20th. — A bad night from pain of the breast. Cough and expectoration better. Two dejections. Pulse 100, soft. — Repetatur mistura mucilaginosa cum tinctura opii.

21st. — A better night. Pains of the chest and of the loins better. Some dysuria, with which he has been affected since the commencement of his present symptoms. Pulse 100, full. Heat 100. One dejection. — Repetatur mistura mucilaginosa c. tinct. opii, et vespere si perstat dysuria; adhibeatur balneum tepidum.

22d. — Pains of chest and dysuria relieved by the bath. Cough the same. Expectoration difficult. Pulse 108, full. Heat 98. No dejection. — Repetatur mist. mucilag. c. tinctura opii ammoniati, et cras mane capiat catharticum cum bolo submur. hydr. c. jalapa.

23d. — A restless night. Cough more severe. Pains diminished. No effect from the cathartic. Pulse 100, full and sharp. — Statim capiat infusus sennæ, ℥iij., omni hora donec alvus plene dejecta fuerit.

24th. — Pulse 100. Heat 98. Cough diminished. Pain of side much better. Several dejections from cathartics of yesterday. — Repetatur mist. mucilag. c. opio.

25th. — Pain and cough diminished. Pulse 104, full. — Repetatur mist. mucilag.; capiat cras mane infusus sennæ, ℥iij., omni hora donec alvus soluta.

Eight o'clock, P. M. — Abdomen painful and tumid. No dejection for two days. — Capiat statim olei ricini, 3j.

28th. — Three dejections from cathartics. Hæmorrhoidal affection. Abdomen still hard, tumid, and painful. Other symptoms diminished. Pulse 106. Heat 100. — Repetatur mist. mucilaginosa cum tinctura opii ammon.

30th. — Pulmonary affections much diminished. Hæmorrhoidal swellings very painful. Constipation. Pulse 112. Heat 100. — Capiat cras mane olei ricini, 3j.; applicantur tumoribus hæmorr. hirudines, x.

April 1st. — Hæmorrhoidal tumors much diminished. Catarrhal symptoms the same. Pulse 112. Heat 98½. Great debility. Two dejections. — Repetatur mistura mucilaginosa; habeat vini Hispaniæ albi, 3iv. To have a small piece of beef-steak daily.

2d. — Last night no complaints, but of great weakness. Pulse very quick (140). Heat 103. Died at four o'clock this morning.

Dissection. — April 4th. — When the body was laid out for inspection, there were observed several black spots on the skin, and when cut into they presented a dark medullary appearance. On examining the brain, some of these were found to penetrate the skull, so as to render it of a dark colour, but not to soften it. Several of these little black tumours were seen on the surface of the dura mater. There was considerable effusion under the arachnoid coat, but none in the ventricles. The brain was rather softer than natural.

When the integuments of the thorax were reflected, several of these dark spots were seen protruding through the parietes, and some were attached to the cartilages of the ribs. On opening the thorax and abdomen, all the viscera were found to be perfectly *studded* with these little black tumours, varying in size from that of a pin's head to that of a chesnut. On cutting out the lungs and other viscera, the tumours were found to penetrate their substance. Those of the liver were the longest; some of these varied in colour, approaching to white. All of them had the same medullary texture.

Edinburgh, 16th April, 1823.

II.

Case of Pemphigus. By EDWARD THOMPSON, Esq. Whitehaven, Member of the Royal College of Surgeons, London.

— CARTMELL, a fine boy, four years old, was recommended to the dispensary of this place on the 28th of March. He was then affected, according to the account given by Mr. Hodgson, the Apothecary, with fever somewhat resembling that preceding hydrocephalus, but more ardent. He had pain and tossing of the head, sickness, and occasional vomiting and pain in the bowels. He was seized at first with shivering, which was soon succeeded by a hot fit. These symptoms continued without abatement till the 4th of April, when the ardour of the fever subsided in some degree, and was followed by a lower excitement. On the morning of the 6th were observed on different parts of the body, but especially on the thighs and abdomen, small vesicles, which in a few hours rapidly increased. The pulse fell, after the appearance of the bullæ, to a hundred, and the other symptoms were greatly mitigated; but the child's strength had sunk. I saw the boy with the above gentleman on the 8th,

on the third day of the eruption, and found the symptoms those of low irritative fever; pulse near a hundred, and weak; tongue very white, without vesicles, nor any on the inside of the cheeks or lips; no soreness of the throat; skin hot, though partially so, and when pressed upon giving pain, even in those parts entirely free of eruption; bowels open; thirst great. He was restless and fretful, and not content except on his mother's knee. He had slept none scarcely from the first attack. There were, on examining the body, a great many vesicles commencing, and a few that had been either broken by the child's exertions, or spontaneously. I observed two, one on each thigh, that had been recently ruptured, near five inches long. The parts from which the cuticle had been removed, in these extensive phlyctænæ, appeared almost in a gangrenous state—the colour livid, the cutis cracked and flocculent, as about to separate, yet of nearly the same temperature to the feel as the neighbouring skin. I could not perceive any ulcerative process going on, in or surrounding these spots; the edges were a little elevated and inflamed, not unlike the line of separation in gangrene. It was only on the thighs the bullæ grew to any size; those on the other parts of the body were small in comparison, the largest not exceeding an almond, and not numerous; I counted three on the face; those on the body were in different stages of progression, which I did not take the pains to number. Those in the first stage resembled chicken-pock, the fluid of a dirty straw colour. There was little or no inflammation round the margins of those that had not burst; surrounding those that had, there was a slight blush.

The treatment pursued during the fever was strictly antiphlogistic, except during the twenty-four hours immediately preceding the breaking out of the eruption. Before the bullæ appeared, the type had changed, and wine, with cordials, were directed. When I visited the child on the 8th, the symptoms of debility were great, and these continued to increase till the morning of the 10th, when he expired. Tonics, with stimulants and anodynes, were ordered, but every means failed in checking the progress of the disease.

The above severe case of pemphigus, a disease of rare occurrence, took place in a child of the healthiest appearance. It had not been exposed to any infectious disorder, nor was there any contagion prevalent. There had no variety of food been taken differing from that usual to the family, and the little boy had been in good health till he began with what the parents thought a feverish cold. The cause, near or remote, therefore, is difficult to assign. According to the reigning opinion, we are to consider such

complaint as symptomatic of other affections, and not as an original disease; but if we take a view of the history of this disease, which can only be gained from the few cases published, this opinion does not appear very tenable.

Bullæ, there is no doubt, do sometimes appear in some stages of pestilential fevers; they, however, seldom arise independent of erythematic, erysipelatous, or gangrenous inflammation, showing their dependence upon these affections, rather than as symptomatic of the fever itself. This, it is probable, has been the reason of their not being alluded to in the writings of former times: we see no mention (with one or two exceptions) of vesicular eruptions appearing, or at all being looked upon as symptomatic of malignant fever, from Galen down to Pringle. Fracastorius, in his account of contagious distempers, when speaking of punctula taking place in fever, does not direct the attention to any eruption of the vesicular kind as symptomatic of malignant distempers. Thus, then, phlyctœnæ do not frequently occur as consequential to malignant fever, else we should have heard more respecting their appearance in complaints so common. If they appear subsequent to inflammation of the skin, then they must be viewed as an effect of that inflammation, whether erysipelatous or gangrenous; in one case they rise from apparently a sound skin, in the other the skin is perceptibly diseased before they are observed.

Pemphigus, as an epidemic and contagious fever, *an generis*, has been doubted to have had any existence; of this in England we are unable to judge, having had no experience either to ground our belief or disbelief of such an epidemic. It is certain that it has not been observed to spread in our country by contagion, yet there is no reason, from what has been advanced to the contrary, to discredit the relations of others. In Prague, it is said, such a disease did spread rapidly, and was fatal in its effects. In latter times, Monsieur Petit saw upwards of thirty cases, and from the manner the disease spread amongst them, he was led to view it as highly contagious. The instances which the English records present militate against its contagious nature; no conclusion of the kind can be drawn from the cases by Drs. Stewart, Dixon, and Hall. It is probable, therefore, that there are either, as has been supposed, two diseases, or that this one requires particular states of the atmosphere, and other circumstances favourable to its spreading by contagion. It was observed by Sydenham, that the diseases that arose during the prevalence of an epidemic, partook of its nature in some measure. Thus small-pox was found to modify other pestilents. Whether we are to account for the dissemination of

pemphigus, at different times, on the continent, in this way, is difficult to say; if this could be proved, however, the symptomatic nature of pemphigus would yet admit of doubt.

I cannot learn that any other children have been attacked in a similar way to the boy Cartmell.

Whitehaven, April 25th, 1823.

III.

Case of Congenital Dropsy of the left Ventricle of the Brain, giving rise to a Tumour on the Head analogous to Spina Bifida. By W. C. DENDY, Esq., Surgeon to the Royal Universal Dispensary for the Diseases of Children.

A boy, ten weeks old, was presented at the Dispensary for the Diseases of Children, in June, 1821, with a diaphanous tumour on the left side of the head. The mother reported the labour to have been natural, and the child's general health to have been apparently good for the first eight days, after which it began to exhibit symptoms of constitutional derangement: an aphthous eruption appeared in the mouth, the bowels were disordered, and discharged frequently green, liquid fæces: emaciation supervened, but it still continued to suck well, and the stomach did not seem much deranged.

At the time of my first seeing the child, small doses of calomel and the cretaceous powder had, in some degree, improved the appearance of the stools. The emaciation, however, continued, and the tumour rapidly increased in size. Considering that no method of cure, by internal remedies, could be employed with any hope of success, I resolved to adopt the plan introduced by Sir Astley Cooper into the treatment of spina bifida, and put in practice, in a similar case to the present, by Mr. Earle.* I accordingly punctured the tumour, which, at this time, measured upwards of six inches in circumference, four and a half at its long, and three and a half inches at its short diameter. A small portion of its contents was evacuated. No epileptic symptom supervened on pressure. Puncture of the tumour was thrice performed, in the space of nine days, and about eight ounces of water removed at the three operations. No unpleasant symptom supervened until some hours after the last performance of puncture, when the child appeared slightly con-

* Transactions of the Medical and Chirurgical Society, Vol. VII. p. 427.

vulsed. It died on the following day, which was the tenth from the first operation.

Dissection.—On dividing the integuments over the tumour, the coronal, lambdoidal, and squamous sutures, were seen nearly united by cartilage. The left parietal bone was nearly divided in two by a wide opening of about two inches in length, and half an inch in width. Around this cleft the pericranium was lined with a membrane, forming the internal paries of the tumour, which was considered to be the dura mater protruded by the effused fluid which it contained. The edges of this cleft were cartilaginous, ossification not having advanced farther than the central portions of the halves of the parietal bone, into which halves the effused and protruded fluid had divided it. Cellular bands crossed the parietal opening at both its ends, and firmly connected its edges. On looking through this cleft, a considerable portion of the cerebrum appeared to be wanting. On removing the parietal bone and the left hemisphere of the brain, the ventricle of that side was exposed, and the communication between it and the external tumour, through its ceiling, part of which was wanting, was readily seen in that direction. Owing to the deficiency of the cerebral substance in this situation, the ventricle and tumour formed one cavity, which, instead of the usually delicate membrane of the ventricle, presented a layer of lymph, into which vessels were seen to ramify. The substance of the brain around this membrane was softer than usual. On the plexus choroides there was a small tumour, apparently arising from a varicose state of vessels, about the size of a shot. The thorax and abdomen were not opened.

Remarks.—In this case, the fluid seems to have been deposited in the left ventricle before the period of the formation of the great cerebral lobes, and at the time when the parts situated towards the base, &c. of the brain were undergoing the formative process; and as these parts became more fully developed, they pressed the fluid contained in the ventricle outwardly, and thus prevented the ceiling of the ventricle and the part of the parietal bone directly over it to be formed. The integuments were, however, fully produced, because we find, if we attend to the progressive development of the cranium and its contents, that the integuments are fully formed, and even the cartilaginous nidus for the production of the bones are, in several parts, produced before the brain and especially its hemispheres are developed. As the fluid accumulated, in this stage of foetal existence, and as it was protruded externally by the formation of the parts of the brain beneath, and on each side of it,

and by the more unyielding state of the cranium towards its base, not only were the parts which had not been previously formed, and which, under the usual circumstances, are placed above the fluid effused in the ventricle, prevented from being produced, but, as the fluid became protruded, it carried along with it the membrane containing it lining the ventricle, and also the dura mater, both which membranes became the internal coverings to the opening in the parietal bone, and to the external tumour. The inflamed appearance of the internal membrane doubtless arose from inflammation supervening in it after the first puncture: the softened state of the brain surrounding the membrane and the lymph which covered it evince that such was the case. The cartilaginous edges of the opening through the parietal bone show that the protrusion of the effused fluid was previous to the commencement of ossification in that bone. The structural derangement in this case was exactly of the same nature as that which has usually obtained the name of *spina bifida*. The only difference was in its situation.

Great Eastcheap, 10th March, 1823.

IV.

Case of Poisoning by Nux Vomica. By JOSEPH OLLIER, Esq., Surgeon to the Western Dispensary.

I WAS called up, about two o'clock in the morning of Wednesday, April 30th, to a young woman, residing in an adjoining street, who, it was stated, had just taken an ounce of arsenic. I obeyed the summons as speedily as possible, and, on arriving at the house, found my patient so undisturbed and so free from pain, that, considering the time which had elapsed, I felt assured she could not have taken the acrid and violent poison named. This lost time I estimated at half an hour, at least, for I learned on my way that her husband had been endeavouring, in vain, to procure assistance at the houses of two Practitioners, previous to his calling on me. The woman was sitting by the fire quite collected and tranquil; her pulse about 80, and regular. On my asking her what she had taken, she replied, "Oh, *some* stuff, but not arsenic; they told me they did not sell that." The cup she had used could not be found where she said she had put it.

I confess that, from these circumstances, I was in hopes either that the druggist, suspecting her intention, had deceived her, or that she had wished merely to frighten her husband, with whom I then knew she had been quarrelling;

and as the shop at which she told me she had procured the drug was distant but a few doors, I determined to go there, inquire what she had taken, and supply myself with the necessary remedies. I directed her husband, therefore, (the only person who was then, or indeed at all, with her until her death, for the woman of the house had lain in but a little while before), not to leave her for a moment, and to get ready some warm water.

I found it impossible, in the time I had to spare, to make the gentleman in question hear my knocking. After a trifling delay, therefore, I left the watchman at his door, and ran on to another in the immediate neighbourhood, who furnished me instantly with what I wanted; and in returning, I was told that the poison the woman had taken was the *nux vomica*, of which she had purchased half an ounce. During my absence, also, her husband had found the cup, in which there was a teaspoon, and, I judged, from a dram to a dram and a half of thick sediment.

I presume that I might have been absent about ten minutes, certainly not more, and I now found the sufferer agitated and in tears. She was perfectly sensible and without pain, but seemed in alarm, laid hold of her husband's coat, and entreated him not to leave her. — [I will here state, that I am now aware he had been threatening all the previous day to abandon her.] — I observed that she had thrown herself back in her chair, and that her legs were extended and considerably separated. She requested the landlord of the house, who at that moment came into the room, to leave it immediately. A perspiration had broken out on her skin, her pulse had become faint and much quicker, and she called frequently for drink. I mixed two drams of *pulvis ipecacuanhæ* in a common teacupful of water (warm), of which I gave her about a fourth part every five minutes, and of which I got down three doses, the last with great difficulty. She had also warm water at intervals, to still her repeated calls for drink; but of this she was not permitted to swallow much, nor indeed did she seem inclined to do so when it was at her lips.

Before I was prepared to give her the first dose of her medicine, she had a slight and transient convulsion. Recovering from it, she was in great trepidation, kept fast her hold of her husband, and refused to let him go, even for the alleged purpose of getting her drink. In a few minutes after, she had another and a more violent attack, and shortly afterwards, another. I should estimate the duration of these fits at from a minute and a half to two minutes. In them she retained her grasp; her whole body was straightened and

stiffened; the legs pushed out and forced wide apart; *I could not perceive* either pulse or respiration; the face and hands were livid, the muscles of the former, especially of the lips, violently agitated, and she made constantly a moaning, chattering noise. I thought she was not unlike one in an epileptic fit, but that she did not struggle, though, as she was forced straight out, it became difficult to keep her from falling on the floor.

In the short intervals of these attacks, she was quite sensible — was tormented with incessant thirst — perspired — had a very quick and faint pulse — complained of being very sick — made many attempts to vomit, and, when requested, put her finger into her throat with a view of exciting it. She continued to refuse to let her husband move, though his posture had become very irksome, and to the question, Whether she was in pain? replied, No — no — no!

A fourth and most vehement attack soon followed, in which the whole body was extended to the utmost, and she was rigidly stiff from head to foot; insomuch that, with all the force I chose to exert, I could not bend the thighs on the pelvis to replace her in her seat. From this she never recovered; she fell after it into a state of asphyxia — shall we say that she *then* died, for she never breathed again? She now relaxed her grasp — her discoloured hands dropped upon her knees — her face too was livid — the brows contracted — the lips wide apart, showing the whole of the closed teeth, and a salivary foam issued plentifully from the corners of her mouth. The expression of the whole countenance was at this moment very frightful. In lifting her up to lay her on the bed, we discovered that the urine had been discharged, for the clothes under her were quite wet. This took place in little more than half an hour after I first saw her; about a quarter before three o'clock in the morning.

About eight, when I saw her again, she was still as straight and stiff as a statue — if you lifted one of her hands the whole body moved with it, but the face had become pale in comparison, and its expression more placid. The side which lay next the bed was not yet cold; she had not, however, then been undressed.

On Thursday, the head and trunk were opened. The joints had then become as pliable, as before they were unyielding. I regret that neither my own time, nor that of the gentlemen who were with me, permitted us to open the spinal canal.

The vessels of the pia mater were turgid with blood. Small ramifications injected with red blood could be seen all over its surface. There was at least an ounce of fluid in

the ventricles. There was also a small quantity of bloody fluid in each cavity of the pleura. The heart was pale, flaccid, and empty. In the stomach about a pint of brownish fluid was found. We observed also a large *slightly red patch*, nearly a hand's breadth in size, on the internal coat, covering one of its sides — the surface to which the poison had been applied? We did not discover any other morbid appearance. Her husband, in his evidence before the inquest, described her as acting frequently like a mad woman; and I think it probable that her brain had been occasionally in a state of great excitement for some considerable period.

On the whole, we may perhaps conclude, that if this unfortunate occurrence had taken place in the day time, with sufficient help at hand, the result might have been different to what it was. I am not ignorant that there are stronger and more speedy emetics than that I used; but in the first impressions on my mind I procured ipecacuanha, and afterwards, unhappily, I had neither means nor time to get any thing else. I believe, too, that the time lost in the first instance had allowed the poison to exercise a fatal power on the nerves of the stomach.

Had the spasmodic rigidity, which remained so many hours after apparent death, any thing to do with life? Could artificial respiration have been instituted with any prospect of success, while the whole of the poisonous substance remained in the stomach? I certainly think that it could not.

Queen's Square, Westminster, 11th May, 1823.

V.

Case of Puerperal Convulsions, attended with a complete, but temporary loss of Sight. By HENRY DAVIES, M.D.

ON the 13th of March last, I was called, at four A. M., to Mrs. J——, aged thirty-six, in her first labour. I understood that she had been in bad health during the greater part of pregnancy; that she had had lingering pains for several days; that they had come on more regularly in the course of the preceding evening; and that, during the night, she had had *two or three rigors*. I was also informed that she had made water, and had had several stools. Her pains were now constant, but feeble. The head of the child was so low as to enable me to feel the tip of the ear just above the pubis, inclining to the left side. I was surprised to find the bladder full, and drew off two quarts of water. Pulse was frequent, but somewhat oppressed. Skin moist. She spoke

rationally, but said she was quite blind : not the slightest alteration was produced in the iris by the application of a lighted candle. She complained much of pain in the head. She was extremely restless, and tossed her arms about her in a distressing manner. The tongue was moist ; she complained of its being sore, and it appeared swollen. Eighteen ounces of blood were immediately abstracted, and an enema administered. The labour pains still continued to be frequent and feeble, and the head of the child remained stationary. From the state of blindness, which was not relieved by the abstraction of blood, I was fearful of some permanent injury to the brain. The forceps were applied with some difficulty. On traction being attempted, a violent convulsion came on, which her sister said was worse than the one she had had in the night. This was the first intimation I received that convulsions had been present. A cork was put in her mouth, the bandage taken off the arm, and the blood allowed to flow copiously, without regard to the quantity, until the pulse began to sink. Cold water was applied to the face and head. The forceps, from finding that the use of them brought on convulsions, were withdrawn, and the child's head perforated. As soon as the bulk of the head was diminished, it was easily drawn down by the craniotomy forceps, and the child delivered. The convulsion subsided, but there was no disposition to uterine contraction. Half-past eight, A. M., to half-past nine, the pulse remained moderately good. She was free from pain, and disposed to sleep.

One o'clock, P. M. — The placenta and uterus remaining in the same state as at ten, the patient having had some quiet sleep, the placenta was delivered cautiously ; it adhered firmly to the fundus, which was as high as the umbilicus. There was but little discharge ; but from that time till half-past four a succession of fainting fits took place. Volatile alkali, brandy, and tinct. opii, were given in divided doses, and at short intervals. In the evening her urine was drawn off, and the vagina washed out with an infusion of flor. chamom., after which she fell into a sound sleep, and, on the whole, passed a good night.

14th. — She complains of great throbbing of the temples, and confusion of head. The tongue swollen and wounded, having been caught between her teeth, from her sister letting the cork slip out. Pulse frequent, and feeble. Limbs cold. The urine was drawn off, an enema administered, and a mixture, composed of the liquor. ammon. acet. and camphor. Cold lotions were applied to the forehead, the hair removed from the head, and quietude enjoined ; friction was applied to the limbs, and hot bottles to the feet.

15th. — Pulse 140. Skin warmer. Belly sore, not much discharge. Throbbing pain in the head.

Mist. Sennæ Comp., 4tâ quâque horâ, donec alvus soluta fuerit.

The mixture containing the acet. ammon. and camphor was continued, the urine drawn off, and the vagina injected.

16th. — Pulse 140. Belly open. Tongue less swollen. She still complains of pain in the head. Treatment the same, with the exception of the addition of a small quantity of the liquor. potassæ to the camphor mixture.

17th. — Slept four hours in the night. Pulse 120. Sensations of pricking and shooting in her head. Great pain in her elbows and knees. Belly open. Cold applications to the head. Repeat the mixture. Inject the vagina with the inf. flor. anthemidis.

18th. — She can now make her water. Bowels regular. Pulse 108. Pricking sensation in the head much less. Tongue moist, and assuming a more florid appearance. Pain of the legs and elbows continues. Repeat medicine. Friction to the limbs. Inject inf. anth.

20th. — Pricking sensation in the head and pain removed. Vision now distinct and clear. A strong light, however, still affects her eyes. Belly regular. Pulse 100.

R Spirit. Æther. Nit., mxxx. ter die, in hordei decocto.

24th. — She can pass her urine freely; sits up nearly all day in her chair, but complains of pain in leg and ankle of the right side.

April 13th. — The patient is quite re-established in health and appearance, and all the natural functions are properly and duly performed; but she is not able to walk, from want of power in the leg and ankle, for which she is using local stimulants and friction.

The observations that may be made on this case are: —
1st. The little reliance that is to be placed on the information given by nurses and attendants; and the necessity there is for medical Practitioners making every inquiry, 1st, as to the condition of the bladder, the distended state of which in this case was of itself sufficient to have induced convulsion — [It is presumed that the dribbling of the liquor amnii during the pains had been mistaken for the discharge of urine]; and, 2dly, with regard to the presence of convulsions, the ignorance of the attendants, in this case, having led them to describe the actual accession of a convulsion as a mere occurrence of a rigor; the real nature of which, however, was readily inferred from the nervous symptoms which were present; and the state of the pupils; and the practice which was immediately had recourse to, namely, bleeding

and instrumental delivery, was founded on the opinion I had formed respecting the exact state of the case. 3d: To what are we to attribute the temporary and complete loss of vision for three days? Was it from pressure occasioned by an engorged state of the blood-vessels? That such was the case, is evinced by the circumstance that the patient had no recollection of any sensation both during, and for some time previous to, and after delivery. Indeed, the temporary loss of vision may be considered as evincing the peculiar vascular derangement in the brain, on which puerperal convulsions seem to depend, to have been present in its most aggravated form. Dr. Denman mentions a somewhat similar occurrence in a case, page 380 of the octavo edition of his Introduction to Midwifery. The patient had been subject to severe headaches previous to labour, which were relieved by leeches to the temples. When she fell into labour, she became blind, and had one convulsion. The blindness remained in some measure for several days after her delivery.

To the very copious depletion, which was put in practice to as great an extent as appeared compatible with the preservation of the vital actions, the recovery of this patient seems chiefly to be attributed. Dr. Denman, at page 384 of the work already quoted, refers to a case mentioned by Dr. Brownfield, which was bled without effect. During a convulsion, the bandage came off the arm, and a very considerable quantity of blood flowed. The convulsions, from that time, ceased.

Conduit Street, April 28th, 1823.

VI.

Case of Phthisis Pulmonalis, showing the Efficacy of Tartar Emetic Ointment in arresting the Progress of that Disease.
By WILLIAM GAITSKELL, Sen., Esq., Member of the Royal College of Surgeons, London.

AN unmarried female, about thirty years of age, of a delicate habit, and subject to catarrhal affection on the slightest exposure, was attacked suddenly, in the spring of 1822, with fever, accompanied with dyspnœa, pain in the chest, and severe cough. Not being in good circumstances of life, she sought advice from some druggist in the neighbourhood, who made use of the usual routine of pectorals, but without the slightest alleviation of symptoms. In this way she proceeded for about four months, when her body became greatly emaciated, and subject to irregular flushes of

beat about the head and chest, cold feet and hands, with loss of appetite and strength. Every evening she had a feverish paroxysm, followed by copious perspiration. The catamenia were scanty and irregular. Having lost two brothers in phthisis pulmonalis within the last three years, scrofula being hereditary in her family, she became seriously alarmed; and, though she solicited my advice, persisted in an opinion that all remedies would prove useless.

At this visit, I found my patient with a pulse of 120; skin hot and dry; respirations short and quick; loss of appetite; bowels confined; urine scanty, high coloured, and depositing much sediment. A constant teasing cough, with much purulent expectoration. To diminish the force of arterial action, I bled my patient to the amount of sixteen ounces, and repeated this for three days; kept the bowels soluble by divided doses of sulphate of magnesia, and the skin perspirable by ten grains of Dover's powder at bed-time. But, nevertheless, the pulse kept at 100, the strength diminished, the body wasted, the expectoration was copious, with flying pains through the chest, and no approach to convalescence; great depression of spirits supervened, and a determination to relinquish all further trial of remedies.

About this period, the late Dr. Jenner's valuable remarks on the powerful influence of tartar emetic ointment,* when applied to the skin, in arresting the progress of the most formidable diseases, came into my possession; and in full confidence of success from this new remedy, I prevailed on my patient to make trial of it,† and, I am pleased to say, with the happiest result. I ordered one dram to be well rubbed into the skin, night and morning, between the elbow-

* R Antim. Tartrat. Pulv. ʒij.
 Ung. Cetacei, ʒix.
 Sacch. Alb. ʒj.^a
 Hydr. Sulph. Rubr. ʒv. M.
 ft. unguentum.

† Since my perusal of Dr. Jenner's pamphlet, I have employed the above ointment in several cases of pertussis, rubbed on the Scrobiculus cordis, and with considerable benefit; also in enlargements of the joints from chronic inflammation, both rheumatic and scrofulous. I was acquainted with the power of tartar emetic, applied to the skin by inunction (ever since the year 1790), to produce suppurating pimples, but made no practical use of it. — See Observations and Experiments on the External Absorption of Tartar Emetic and Arsenic, by William Gaitskell, Surgeon, Rotherhithe, in Medical Memoirs, Vol. IV. p. 79.

^a Sugar prevents the ointment from becoming rancid.

joint and axilla. This was continued for a week, when a large crop of suppurating pimples made their appearance, exactly like small-pox, which gradually decayed under a mild bread and water cataplasm. While this soothed the skin affected with the eruption, the same irritating process was established on the other arm, and quieted afterwards by similar means. About the height of this second eruption, continuous sympathy took place, and the skin became covered from head to foot with numerous small itching papulæ, which were so troublesome as to deprive my patient of all comfort for more than a week. These were allayed by the repeated application of unscented hair powder, and gentle but constant purging.

Fortunately, about this crisis, the constitutional and local pectoral symptoms gradually abated, together with the fever. The pulse came down to 80, the appetite returned, and permanent convalescence took place. She is now perfectly well, and has withstood the whole of this severe and trying winter.

Rotherhithe, May 3d, 1823.

VII.

Case of attempted Suicide by Nux Vomica. By C. F.
TACHERON, M.D. &c. Paris.

MARY OSMIWIY, aged twenty-seven, teacher of music, of a sanguineo-lymphatic temperament and a good constitution, resolved, in consequence of some domestic grievances, to put an end to her existence, and obtained from a druggist, on the 2d February, 1821, a dram of nux vomica for this purpose, under the pretext of destroying rats with it. She took the whole of this quantity in a glass of wine; and a quarter of an hour afterwards was seized with pain, and a sense of weight and heat in the stomach, with a burning sensation in the pharynx, and with a painful feeling of rending and of lassitude in the limbs. To these succeeded convulsions, stiffness of the joints, especially of the knees; afterwards, the gait became tottering, and the whole body was seized with symptoms of complete and violent tetanus, the jaws being firmly locked, and the limbs rigidly extended. Milk was given in large quantities; which excited copious vomitings of alimentary substances, amongst which, most probably, was a portion of the poison. She was brought to the *clinique interne* of the School of Medicine, at half-past three o'clock of the same day, when the following were the

symptoms: a complete state of tetanus, aggravated at intervals by violent convulsive movements. The intellectual faculties appeared a little troubled: she wept occasionally. The cheeks and eye-balls were flushed; the gums red; the tongue inflamed and contracted; the thirst ardent; the pharynx constricted; the stomach painful; the pulse frequent, and the skin hot. — *Treatment*. Oleaginous and emollient draughts, with lavements of the same description.

February 3d. — The tetanic symptoms have nearly disappeared; but the pains of the voluntary muscles, especially those of the neck and limbs, remain, and are greatly increased by attempts at motion. The intellectual functions are restored; but the face is still flushed, and the tongue and palate inflamed. Thirst is still ardent. Pain of the stomach continues, and is attended with colic-like pains in the bowels. She has had two vomitings of alimentary matters, and one stool; pulse rather soft than hard, but frequent. — Sweetened gum-water, holding aperient and cooling salts in solution. Oleaginous and emollient lavements.

4th. — Pains of the neck and limbs remain, as does also the inflammation of the pharynx and palate. The thirst is less urgent; respiration free; pulse small, soft, and less frequent. She experienced a loss of sight for two hours, and four accessions of cold rigors followed by warm perspirations. Her sleep was agitated, and attended with convulsive movements from time to time. She has passed eight liquid yellow stools. — Same treatment.

5th. — She passed a calm night. Slight pain of the epigastrium and belly. Sight feeble. Skin soft and moist. She has passed three motions. — Rice-water acidulated with syrup of vinegar. Half a dram of diascordium. Rice.

From this period she rapidly recovered, and was discharged cured on the 14th of the same month.

VIII.

On the Employment of Belladonna in various Diseases. By POWELL CHARLES BLACKETT, Esq., Member of the Royal College of Surgeons, London.

HAVING employed the atropa belladonna with great advantage in several nervous and inflammatory disorders, I am desirous to draw the attention of the readers of the *REPOSITORY* to the subject. The particular preparation of this medicine, which I have been in the habit of using, is a very

strong tincture made from the extract in the following proportions: take ten drams of the most carefully prepared extract of belladonna and one pound of proof spirit, macerate for fourteen days, and then filter. I endeavour to procure the extract in a state of its greatest activity, and possessing the virtues of the plant undiminished in the preparation, and I consequently find a single drop of the tincture which is made from it to be more efficacious than a quarter of a grain dose of the extract, as it is usually obtained from druggists.

I have frequently employed this tincture in cases of mania, in various forms of convulsions, in hysteria, and in pertussis, with decided efficacy. In all cases of its internal use, I have commenced with small doses, generally with two or three minims in the day. I have been led to embrace this cautious mode of commencing the remedy, because I have found that when given at first in a larger dose, owing to peculiar states of the constitution, especially in old subjects, it sometimes depresses the powers of life to a greater extent than was wished. The rapidity with which I have increased the dose, or the extent to which I have carried it, has always been regulated by its effects, by the circumstances of the case, and by the constitution of the patient; always keeping it in mind, that its effects occasionally are not very marked for some time, when they suddenly evince themselves in a very decided manner; thus showing that, in some instances, it does not act upon the nervous system until its exhibition has been carried to a certain extent, when its effects are quickly expressed throughout the whole frame.

In several forms of cutaneous or superficial inflammation, I have experienced the greatest service from the external use of this tincture, either when added to a lotion, or to any ointment which appeared most suitable, in other respects, to the particular nature of the case. When I have employed it in a lotion, a dram of the tincture to eight ounces of the liquid has been the proportion adopted, and in this form I have found it very beneficial in external inflammations and in irritable ulcers.

I have used the extract either alone, or combined with some ointment, with decided advantage, in spasmodic stricture of the rectum; and I have found it useful in gonorrhœa, especially when chordee was present, when conjoined with double the quantity of mercurial ointment, and rubbed along the course of the urethra. Without offering more general remarks on the use of this narcotic, I shall conclude with the particulars of a case of mania in which I gave it with advantage, after other modes of treatment had failed in accom-

plishing a cure, although they may have acted beneficially in disposing the system of the patient to the influence of the belladonna.

5th March, 1819. — C. G., aged forty-eight, of a pale complexion and spare habit, who had been accustomed to a very active life, became, in consequence of repeated misfortunes in business, the subject of mental derangement, in the form of melancholia, and being of a religious disposition, his mind was constantly filled with apprehensions of his future state. I saw him about two weeks after these commencing symptoms of derangement, when he had all the actions of a furious maniac. His bowels were constipated; his tongue foul; urine in small quantity, and of a high colour; pulse 86; skin dry and hot. He complained of pain at the scrobic. cordis. After subjecting him to the usual mode of coercion, a course of purgatives, combined with anodynes and occasional injections, was entered on, general and local blood-lettings were employed, and blisters applied to the nape of the neck. This treatment, which was varied according to circumstances, and conjoined with various internal remedies, was continued until the 5th of April, when I resolved to employ the belladonna, from the circumstance of my having used it with success in four cases of a similar nature; it was prescribed in the following manner: —

R Mist. Camphoræ, ℥vss.
Tinct. Belladonnæ, ℥ij.
Liquor. Antim. Tart., ℥ij. M.

Capiat cochlear. dua ampla, sextis horis.

April 6th. — The symptoms were much the same as before, but he had passed a considerable quantity of urine. A draught, composed of cambooge and infusion of senna, was ordered, on account of the confined state of his bowels, and directed to be repeated when circumstances required it.

10th. — The urine was greatly increased; and the symptoms of derangement were not so violent. His bowels were natural; his tongue clean; his pulse at 76, and regular. He was directed to take three table-spoonfuls of the mixture every four hours.

17th. — He has passed the nights in a more composed state, and has enjoyed some lucid intervals. Pulse 70; tongue clean; bowels regular; the pupils of the eyes rather dilated.

R Mist. Camphoræ, ℥vijs.
Tinct. Belladonnæ, ℥iv.
Acid. Citrici, ℥j. M.

Capiat cochlear. tria magna quartâ quâque horâ.

20th.—The pupils are quite dilated, and attended with loss of sight, and a great propensity to sleep. The countenance was rather flushed, but all the symptoms of mental derangement had left him. His pulse, tongue, and bowels, were natural.

The belladonna was discontinued for seven days, when his sight returned. His countenance was quite calm and cheerful. The following mixture was now used:—

R Aquæ Menthæ Viridis, ℥viij.

Tincturæ Belladonnæ, ℥ij.

ft. mist. cujus capiat cochlearia tria magna, nocte maneque.

This mixture was continued for three weeks, and an aperient draught given occasionally. He has continued well from that period up to the present, without the least appearance of a relapse.

From the experience I have had of this remedy, I consider that we cannot expect much benefit from its internal use until it has nearly produced a temporary loss of sight.

Park Street, Grosvenor Square, April 11th, 1823.

IX.

On the Application of Leeches to Internal Surfaces. By a Licentiate Apothecary, Dublin.*

In the third volume of Dublin Hospital Reports and Cases in Surgery, there is a paper by Dr. Crampton, Surgeon-General in Ireland, &c., wherein he strongly recommends the *direct* application of leeches to inflamed tissues (when such application is by any means practicable) as being one of the most effectual means of reducing inflammation in these parts; and, for the speedy and decided success attending this operation, he appeals to the experience and judgment of the several Apothecaries in this city, who have thus applied them by his directions. I, as one, can bear willing testimony to the success attending this mode of treatment, from having often and almost invariably witnessed its good effects. In cases of inflammation of the conjunctiva, the application of one or two leeches to the inflamed tunic has been quickly followed by permanent relief; the same good effect has been equally manifest in cynanche tonsillar; the *early* appli-

* The Editors make it a point, to which they most strictly adhere, not to admit anonymous papers, unless the name and address of the authors, as well as their respectability, have been previously ascertained.

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Appearances in a case of the Uterus.

cation of one leech or more (if both tonsils be simultaneously affected) to the gland, or, to speak with more strict anatomical propriety, to the reticulated membrane which covers it, will be always attended with the most beneficial results; and the pain, trouble, inconvenience, and danger oftentimes attending the swelling, inflammation, and suppuration of these glands, will be totally prevented by this mode of practice. In headach arising from plethora, and accompanied with a rigid state of the vessels of the encephalon, the application of leeches to the inside of the nostrils affords very considerable relief.

In perusing several medical works (principally modern) I have no where met with any author, except the under-mentioned,* who has noticed or recommended the application of leeches to *internal* surfaces, as being likely to be one of the principal means of obtaining relief from the above diseases. I was, therefore, desirous of stating my experience of this mode of treatment, in order that the attention of the medical public may be awakened and directed to it; and, conceiving the practice, as I do (from having often witnessed its good effects), to be one of considerable utility, I was desirous of having its merits or demerits put to the test of further observation. Should the attention of medical men be more directed to it, and a fair trial be given to it, the object of the writer of these few remarks (drawn up hastily, but faithfully) will be obtained.

Dublin, January 27, 1823.

X.

Case of a perfect Fetus found in the Ovary, presenting the size usual at the fifth month of Gestation, accompanied with great Structural Derangement of the Uterus. By W. B. PAINTER, Esq. Surgeon.

[With an Engraving.]

ON the 13th November, 1822, I was called to attend Mrs. —, aged thirty-eight, of a full habit, who had been

* In a work on *Materia Medica, Pharmacy, &c.*, published by L. Jacob. Magneto, Physician to the King of Prussia (A. D. 1703), the application of leeches to internal surfaces, among others, is therein mentioned. The extract I shall give in his own words:—

“*Usus, hirudinum est proprii tantum in sanguine extrahere dum scilicet applicantur, vel ano, vel pedibus, vel brachiis, vel temporibus, vel interioribus naribus, pro varia medica intentione.*”

married many years, had never been pregnant, who had now a second husband, and had but recently returned from the continent. She complained of pain in the loins, extending around the lower part of the abdomen to the pubes; she had also headach, was restless, could not bear the least exertion, and had great nausea after every thing she took, whether in a solid or fluid form. Her pulse was 90, full, and hard. I bled her to the extent of twenty ounces, and prescribed a draught to allay the irritation of the stomach. I afterwards gave her a saline purgative, which produced copious evacuations, and repeated the anodyne draught at bed-time.

14th. — She passed a restless night from excess of pain, which she described as being like to difficult menstruation; and although she had never suffered in so severe a manner from the accession of that evacuation, which had always been regular until her present illness supervened, yet she considered her complaints to arise from that cause, not having menstruated for upwards of two months. She had complained, for the last five years, of symptoms referrible to the uterus; and had, three or four years ago, consulted an eminent Accoucheur, on account of her ailments, which at that time were chiefly characterized by pain occasionally coming on violently across the lower part of the abdomen, remaining a few days, and afterwards subsiding again: he told her that he apprehended cancer of the womb, which she afterwards dreaded; but these complaints appear to have subsided, in some degree, for a considerable time before her present attack.

At this visit, I ascertained that she had some mucous discharge, which was slightly coloured, and which had been present for some days; she also complained of a troublesome cough, at every effort of which she screamed with the acuteness of her pain, which occasioned a sensation described by her, as if something would force itself away, and tear her inside to pieces: she felt also a constant sore pain in both groins. These complaints were not increased by pressure, but her corpulence prevented me from ascertaining, in this manner, the existence of any tumour in the lower abdomen or pelvis at this period, which her symptoms seemed to indicate. Fomentations and opiate liniments were directed to be used frequently; and the internal medicines formerly ordered were continued, with the addition of an emulsion for the cough.

15th. — The pain regularly came on every ten or fifteen minutes in a more violent manner than before. I prevailed on her to allow an examination, that I might satisfy myself, if possible, as to the real cause of her indisposition; after much persuasion she consented, but the slightest effort to introduce

my finger occasioned extraordinary agitation; I was obliged to desist, and content myself with bleeding, and the palliative treatment I had previously prescribed:

16th.—Had a better night. I was again permitted to examine, when I found the vagina, fold after fold, forcing itself downwards, completely interrupting the passage of my finger beyond the second joint. Although the gentlest means were used to pass it as high as the os uteri, I could not succeed, and therefore determined not to attempt an examination again for some time. She remained, with trifling remissions, much in the same state for a fortnight, when I accomplished a more satisfactory examination: the vagina was not so much swelled as formerly, nor yet so painful, and the os uteri was distinctly felt, the cervix being longer and thicker than is usually the case in the early months of uterine gestation. No pain was excited in this organ by the touch, but the instant I attempted to pass my finger towards the posterior part of the vagina, the severest pain was occasioned; and at this time I discovered a tumour, something larger than a goose egg, situated behind the os uteri, high up and rather to the left side, having much the feel of hardened fæces, which, indeed, it might easily have been mistaken for, had not the bowels been kept regularly open.

After having attended this case upwards of six weeks, and finding no material abatement in the symptoms, and having steadfastly maintained my opinion that she was pregnant, and being in doubt about this tumour, I expressed my wish to have the advice of Mr. Travers, of New Broad Street, who was sent for. He attempted an examination, in which he could not fully succeed from the severity of her pain; yet, from the information he obtained in the attempt, he described the difficulty he had of introducing the finger so high as the os uteri; he represented the vagina as in a high state of excitement, the mucous coat being thickened. He ordered her to be cupped on the loins, and an opiate enema to be administered in the evening, recommending me, at the same time, to consult some Accoucheur-Physician. I accordingly sent for Dr. Gooch, who perfectly coincided with me as to the existence of pregnancy, and requested me to continue my remedies. The morning-sickness still continued, the mammae enlarged, and the abdominal tumour became evident. A sufficient quantity of castor-oil was given occasionally, to produce at least two evacuations daily.

December 28th.—The vaginal discharge became very red, and in rather larger quantity, together with bearing down pains, which were rather frequent and sharp, and which seemed to threaten abortion. Bark and acids, with opium,

were resorted to with success. Whenever the pains were violent, I bled her, which generally relieved her; and I continued to visit her every two or three days until the beginning of February, during which month my visits were less frequent, as she became more free from that continued pain which she had experienced during the former period of my attendance, and began to look forward to the approaching season of her confinement, hoping then to get a final release from her sufferings, both mental and bodily. She, however, entertained occasional apprehensions of cancer of the womb, as she sometimes said, "I think it will all end in cancer now;" at the same time she made preparations for a probable accouchement.

By the latter end of February she had so far recovered as to be able to visit her friends, and on one occasion ventured to ride, in a stage coach, the distance of ten or fifteen miles, without material inconvenience, till a morning or two after her return, when she was found by her servant in a swoon, lying on the floor; she soon recovered, and therefore did not take particular notice of the occurrence. On the 10th of March she dined with some friends in the city, three miles from her residence, came home early in the evening, and took a light supper. The morning following, I was called in haste to see her; she was on the sofa in a fainting fit, from which she was with difficulty restored; at every attempt to raise her she swooned afresh. As soon as she was sufficiently recovered, she was put to bed, when she complained of violent throbbing in the pelvis, extending to every part of the abdomen, and accompanied with great thirst, sickness, fainting, a violent bearing down pain, and a constant inclination to make water. I examined, and found the tumour occupying a much larger portion of the pelvis than formerly; but as no fluctuation was perceptible, I could not compare it to any thing else but a collection of hardened feces in the rectum; an examination per anum conveyed the same feeling. I ordered an emollient enema to be injected, prescribed opiates to allay the violence of her pain, and bled her, the pulse having become strong and frequent. The os uteri was not much altered since my last examination, yet she considered herself in the eighth month of pregnancy, and, fully conceiving herself in labour, desired me not to be from home; the pains were so acute, that she declared she could not survive greater agony, and that it was like tearing her to pieces to move even her limbs. The night became one of extreme anxiety and restlessness; thirst, sickness, and fainting continuing, which no remedies would relieve. I visited her early in the morning, being the 12th, and despatched a

messenger for Dr. Gooch. In the interim, I prescribed a saline draught, and was again sent for in great haste about half-past twelve o'clock. She had been out of bed to the night chair, where she fainted. I assisted her friends in placing her on the bed, and sent for my neighbour and friend Mr. Scott, Surgeon, of Romney Street, who came directly, but not in time to see her before she expired, which took place a few minutes after I came to her assistance.

This unforeseen event induced me, in concert with Mr. S., to propose to her friends the chance of saving the life of the infant by the Cæsarean section, which proposition Dr. Gooch, who had by this time arrived, joined us in recommending, and which being acceded to, I immediately performed.

Dissection.—Having divided the abdominal parietes from the umbilicus to the pubes, a large quantity of fluid and coagulated blood escaped, to the amount of several quarts, and exposed to view a large substance, very much resembling, in size and appearance, the head of a fœtus (vide plate, letter K) protruding from the external surface of the uterus; but which, on closer inspection, I found to be the larger one of two semi-cartilaginous substances, growing by small necks from near the right horn of this viscus. After removing the blood, which was diffused in every direction among the bowels, the uterus appeared perfectly entire, but irregularly and enormously enlarged. Turning a little to one side, I found the fœtus, which was lying loose among the intestines, and immediately directed my finger along the umbilical cord to the placenta, which was firmly attached within a membranous sac on the left and posterior side of the womb. I removed the fœtus, which was a female about the fifth month: it appeared to have been dead some days. I afterwards removed the uterus and parts connected with it, together with the fœtus: the whole weighed, in their exsanguineous state, upwards of six pounds. The parts concerned in this extraordinary case are preserved and in my possession.

At my leisure, I separated the placenta, which adhered firmly to the substance of the ovarium and to a great part of the internal surface of the membrane which enveloped the fœtus; I afterwards made a section of the uterus, commencing an inch from the os tincæ, and carrying it through the anterior part of the fundus. This viscus was enlarged and diseased in a remarkable degree: its parietes were very greatly thickened, and in a very irregular manner, owing to the development of tumours in its texture, which appeared to originate in an infiltration of lymph, which had become organized, and presented a dense and semi-cartilaginous appearance: this had taken place chiefly towards its external

surface, giving the uterus an irregular form. Two of these tumours protruded from this viscus, as was just noticed, and were attached to it by narrow pedicles. The internal surface of the uterus was regular, and presented an appearance resembling the decidua: the uterine cavity was not much enlarged. On inspecting narrowly the internal surface of the womb, in order to find the canal running from the cornua into the Fallopian tubes, this passage could not be detected; and on making the examination from the fimbriated extremities, after having detached some of these fimbriæ from the adhesions they had formed, the Fallopian tubes were ascertained to be quite impervious throughout. The right ovarium was entire. The foetus was formed in the left ovarium; the duplicature of the peritoneum enclosing this organ constituted the more external covering of the foetus; its internal one was its own proper membranes. The placenta was intimately connected with the structure of the ovarium, and appeared to be attached to it without any intervening texture. The placenta was consequently supplied from the vessels of the substance of the ovarium: no other vessels than those belonging to this viscus could be observed to be externally connected with the sac enclosing the foetus, and those were greatly enlarged. The rupture of the enveloping membranes, which occasioned the fatal hæmorrhage, had taken place on their superior and anterior sides, not far from the womb, and had torn a portion of the placenta.

Remarks.—There are very few cases on record of genuine ovarian foetation, and I believe this will be found to be the most complete in its development, the foetus being nearly of the size which it usually attains at the end of the fifth month of utero-gestation. It was well formed in all its parts, excepting the head, which was squeezed into a longer form than natural, owing to its situation between the greatly enlarged and diseased uterus and the projection of the sacrum.

Smellie quotes, in his second volume of Cases in Midwifery, from the Philosophical Transactions (No. 150, p. 285), a case, in which a small foetus of the size of a man's thumb was found, on dissection, to have ruptured the membranes of the ovarium, within which it had been developed. The hæmorrhage occasioned by this rupture was the cause of the patient's death.

Another and a very remarkable case is mentioned by Lieutaud, from Bianchi, in the *Historia Anatomica Medica*, tome i. obs. 1533, p. 364. "A woman, about thirty years of age, having menstruated regularly, was seized with considerable pain in the belly, with sickness and faintness. The breasts became distended with milk, the pain continued, she

wasted, and was feverish. In the ninth month she was seized with pain, which continued four days, after which it subsided, and the child ceased to move. Afterwards the menses returned; the tumour, however, remained, and continued nearly in the same state for fourteen years, after which she died in a state of extreme emaciation and pain." The dissection is given as follows:—"Reserato abdomine, peritoneum exsuccum densa et coriacea fœtus incorrupti involucra obtegebat; quæ etiam mesenterio arctissimè jangebantur. Fœtus crustâ quâdam sebaceâ obducebatur; et octo libras pendebat. Omnes ejus partes molles et flexiles annotabantur. Saccus erat apertus qui sinistrum crus fœtus recipit et materiam quamdam memoratæ crustæ haud absimilem. Hic saccus dignoscitur pro ovario dextro, in quo fœtus enutritus, ad debitam nascentium magnitudinem excreverat."

Dr. Granville has lately recorded, in the *Philosophical Transactions* for 1820, a case of ovarian fætation, which came under his observation, which is very similar to the one I have described. The fœtus had reached the fourth month before it burst the membranes enclosing it; in that case, also, the Fallopian tubes were impervious, and the decidua apparent on the internal surface of the uterus.

The most remarkable particulars connected with the case which I have now endeavoured to describe, are:—1st, The circumstance of impregnation having taken place for the first time at so late a period of life, and after chronic disease had existed for several years in the substance of the uterus. 2d, The nature of this disease itself, which had been present five years before the patient's death, and which seems to have been a slow inflammation of the substance of the uterus, giving rise to tuberculous productions both within its walls and on its external surface, without, however, having injured the texture of the ovaria. 3d, The completely impervious state of the Fallopian tubes.

From these circumstances characterizing this case, the following queries may be put:—May the impervious state of the Fallopian tubes be considered to have existed from the time at which disease commenced in the substance of the uterus, or from a more advanced stage of that disease; or may this impervious state be considered to have supervened, after impregnation through the tubes had actually taken place, when the increased determination of blood to the uterus and appendages, consequent on that state, had heightened the previous disease, and increased the size of the uterus to a still greater degree? Can the impervious state of the tubes, which was also noticed in Dr. Granville's case, be viewed as militating against the theory of impregnation

along the channel of the vagina, uterus, and Fallopian tubes, and, consequently, as favouring the opinion of a transfer of the semen from the vagina by means of lateral absorption directly to the ovaria, without its passing through the cavity of the uterus and the Fallopian tubes at all? May we not, in both these cases, have good reason to suppose that an inflammatory action was occasioned in the tubes and their fimbriated extremities, owing to flux of blood to the ovaria and uterus after impregnation had taken place, which readily produced occlusion of these delicate and irritable tubes, especially when such a consequence was most probably promoted by the pressure and distention of the enlarged ovarium, as well as by other contingencies? Is not the proof of the obstruction of the tubes having been previous to impregnation deficient, even in the present case, wherein disease in the uterus, which had been considered as cancer uteri, had existed for several years? Are not cases more frequent than they have been usually considered, wherein sudden death has been the consequence of extra-uterine fœtation, whether in the ovarium or in the tubes, after symptoms having a close resemblance to poisoning or suicide? Does not this circumstance show the necessity of more frequent inspection of the body, in cases presenting similar symptoms to the present, which terminate fatally; and hence, is not this case, as well as others similar to it, important in a medico-legal point of view?

Explanation of the Plate.

A A A. The uterus. — B B B B. Section of ditto. — C. The right ovarium. — D D. The round ligament. — E E. The right Fallopian tube, imperforate. — F F. The cavity of the uterus. — G. The cervix uteri. — H. The os uteri. — I. A small gristly tumour, growing from the fundus uteri. — K. A large gristly tumour, dissected from L, to show the head of the fœtus. — L. The section of the large tumour. — M. The sac containing the fœtus, where it was connected with the upper portion of the rectum. — N N N. Artificial opening in the sac, to show the position of the fœtus. — O. The breach of the fœtus. — P. The umbilical chord. — Q. The head of the fœtus. — R R. Opening of the sac through which the fœtus escaped.

XI.

Case of Profuse Hemorrhage from the Mucous Surface of the Small Intestines, speedily terminating in Death. By E. A. LLOYD, Esq. Senior Surgeon to the General Dispensary.

[In a Letter to the EDITORS.]

As the following case is one of rare occurrence, and by no means practically unimportant, I shall feel obliged by your inserting it in your very useful Journal.

It is the case of a young gentleman, aged fourteen, whose death occurred very suddenly, and almost without any previous indication of disease. The case, indeed, terminated so suddenly, and the disease was so insidious in its progress, that previously to death there were no symptoms by which its nature could be at all ascertained, and, therefore, that part of the history must be very brief, and can be but little satisfactory. I had not an opportunity of seeing the patient before death, and, therefore, am indebted to my friend Mr. Spry, of Charter House Square, for the history of the case previously to that event.

The patient was at school; and two days before he died, feeling a little unwell from slight uneasiness in his bowels, remained out of school, and took an opening draught. The medicine operated in the course of the day, and the next morning he was apparently so well that his schoolfellows accused him of shamming, and it was determined he should go into school, as usual, the following day. In the course of the night, however, or rather early in the morning, he was seized with severe pain in the abdomen, which rapidly increased in violence, and in a few hours terminated in syncope and death. The pain came on so suddenly and violently, and was so wholly unaccompanied with other symptoms of acute disease, that an eminent Physician, who saw the patient a short time before his death, did not hesitate in ascribing it entirely to spasm. During the attack, the countenance was pale, and the pulse small and rapid. The abdomen felt extremely hard, and pressure on it occasioned uneasiness, but not acute pain.

The body was examined about twenty-four hours after death. On the cavity of the abdomen being opened, it was found to contain a considerable quantity of bloody serum, but without the slightest appearance of peritoneal inflammation having existed. The greater part of the small intestines was observed to be of a very dark red colour, and their veins and those of the mesentery were exceedingly turgid with blood. Exclusively of the change of colour occasioned by the congested condition of the vessels beneath, the peritoneal coat of the intestines appeared perfectly healthy, and no adhesion whatever had taken place between the different convolutions. Underneath the peritoneal coat of the diseased portion of the small intestines there were numerous minute spots of extravasated blood, and also between the layers of peritoneum forming the mesentery. The glands of the mesentery were of a dark colour, and somewhat enlarged, but perhaps not more so than the excessive fulness of their blood-vessels must necessarily have

occasioned. At one point, near the termination of the *intestinum ileum*, there appeared to be a small tumour, but on examination it was found to be merely a thin coagulum of blood, about the size of a shilling, lying underneath the peritoneum, on the surface of some of the enlarged glands. The duodenum, upper portion of the jejunum, and the large intestines, were of their natural colour, and appeared perfectly healthy. The stomach also was in every respect in a natural and healthy state.

On cutting open the *intestinum ileum*, it was found that a large effusion of blood had taken place into its cavity; that its inner coat to within an inch of the cæcum was of a dark crimson hue; and that the mucous glands were enlarged, giving the internal surface of the intestine in many parts a granular appearance. The whole of the internal surface of the diseased portion of intestine was lined with a thin coagulum; but when this was removed, and the intestine washed in warm water, it retained its crimson colour. On examination, the internal coat of the lower two-thirds of the jejunum was found in the same state as that of the ileum, and from it effusion of blood had equally taken place. The diseased portion of intestine seemed equally affected through its whole course, so that the line of separation between it and the sound intestine was most distinctly marked.

The quantity of blood effused could not, of course, be precisely estimated, but I consider that there must have been at least between five and six pounds. In the wash-hand basin, in which the intestines were placed for examination, three pounds were collected; into the cavity of the abdomen, too, before the intestines were removed, a considerable quantity had escaped; and also, there was that which was coagulated and remained adhering to the inner surface of the intestines. Moreover, it appears to me that in estimating the quantity of blood effused, we should also take into consideration the pound and a half of bloody serum found in the cavity of the abdomen; for that, I have no doubt, had transuded through the coats of the intestines and veins, as the blood in the cavity of the intestines, though not wholly coagulated, was much thicker than natural, or than what is usually found to be the case when blood is effused from a mucous surface. There are facts before the public to prove that such transudation may take place, and, therefore, it is unnecessary for me on this occasion to offer any additional proof respecting it.

The estimate made of the quantity of blood effused is, I believe, rather under than over-rated. The effusion, too, it

would appear most probable, all took place within a short period of death, as the blood had undergone no change whatever, and none of it had passed into the large intestines. No disease was observed in the liver, spleen, pancreas, or kidneys. The heart and lungs possessed their natural appearance.

Remarks. — That so great an effusion of blood occurring in a boy of only fourteen years of age, should occasion death, is what I conceive every one would expect. That there should be some difference of opinion as to the cause of the effusion cannot excite much surprise; indeed, among those who were present at the inspection dissimilar opinions existed — one gentleman attributed it to congestion, the result of spasm; but it appeared to me to be much more probable that it was occasioned by actual obstruction in some of the large venous trunks. I readily admit I may be wrong, but I really cannot possibly conceive spasm operating so as to produce congestion and consequent hæmorrhage, so peculiarly and distinctly defined as in this case. Indeed, I very much doubt whether spasm is capable of inducing such a state of venous congestion at all. That obstruction taking place suddenly in the trunk of a vein would occasion, for a time, congestion in the corresponding ramifications, is certain; and it is equally certain that such congestion would be confined to those parts from which the return of blood was interrupted, and therefore would, in all probability, be distinctly defined, as in this case. If my opinion of the cause of the hæmorrhage be correct, there will be no difficulty in accounting for the violent pain which attended the case; for when a principal venal trunk suddenly becomes obstructed, and there is no collateral channel through which the blood can be returned, experience proves that it always occasions the most acute pain. That a large vein may suddenly become obstructed to a small extent from inflammation affecting its internal coat, without there being any previous acute symptoms, I am convinced by dissections; but what was really the cause of the hæmorrhage in this case must remain a matter of conjecture, as, from the particular circumstances under which the dissection of the body took place, it was impossible to ascertain the state of the large abdominal veins. I therefore, without further speculation, submit the case for the consideration of your readers.

Falcon Square, 13th May, 1823.

XII.

Case of Cancer of the Lip, in which the Operation lately recommended by M. RICHERAND was performed. By CHRISTOPHER ALDWORTH BULL, M.D. Surgeon to the South Infirmary, and Teacher of Anatomy and Surgery, Cork.

[Communicated in a Letter to Dr. JAMES JOHNSON.]

APRIL 28th, 1823. — Catherine Creedon, ætatis about sixty, applied at the South Infirmary for the cure of an ulcerated cancer of the lower lip. The disease commenced about two years ago, and now extended from one angle of the mouth to the other, and in depth nearly to the reflection of the mucous membrane from the gums to the lip, presenting a fungous-looking ulcerated surface, much everted, so as nearly to reach the lower margin of the chin when the jaws were closed. The integuments of the chin beneath the tumour were of a dark red colour, which appearance, however, I was inclined to attribute to irritation from the acrid discharge of the ulcer. On examination of the neighbouring glands, I could not discover any enlargement or hardness of them, as we generally find in ulcerated cancer of long standing. The disease presented so hideous an appearance, that on first view of it I told the patient that I feared it was too late to attempt any thing in the way of operation; but the poor woman begged so earnestly that something might be done, that I was induced to admit her to a bed in the hospital. Having frequently, within the last three years, used the arsenical plaster with much success in cases of ulcerated cancer in different parts of the body, where operation was deemed unadvisable, I thought it might, perhaps, be employed here, though the case was not one well adapted for its application. Reflecting on the case, I recollected having read, in the Quarterly Periscope of the Medico-Chirurgical Review for September, 1822, an account of a case of cancer of the lip, in which M. Richerand performed an operation different from that hitherto in use, and, on reference to it, the similarity of the cases struck me so forcibly, that I determined on giving it a trial in this instance; though, I must confess, I was not so sanguine as to expect the extraordinary regeneration of parts, which is said to have occurred in M. Richerand's case. Accordingly, on the 1st of May I performed the operation, in presence of my colleague Dr. Woodroffe, Mr. Hobart, Apothecary to the Institution, and several of the pupils, in the manner directed by M. Richerand,

but instead of his flat scissors I used the scalpel, which I consider preferable for many reasons. I commenced it by an external incision through the integuments, and extending beneath the tumour from one angle of the mouth to the other, in form of a long crescent, as recommended. In the next incision the whole of the diseased parts were removed at one stroke of the knife, cutting so low as the frænum of the lip. The artery on each side was secured between the fore-finger and thumb of an assistant, until included in a ligature. In place of agaric, I applied lint to the wound, then a compress of the same, and over it a bandage. On removal of these the third day from the operation, I found that suppuration was fully established, and the surface disposed to healthy action. It has been dressed every day since with dry lint, and to-day (twelfth) is quite healed, not by granulation, but by a process which, indeed, I did not expect, viz. eversion of the mucous membrane and approximation of it to the skin, with *considerable elevation* also; insomuch, that there is hardly any appearance of cicatrization, and a new lip is actually formed; so that, when the jaws are closed, the upper lip and the new surface approach each other so nearly, that the loss of parts appears quite inconsiderable. Much of this appearance, however, must be attributed to that falling in of the jaw peculiar to persons advanced in life. For the first six days after the operation the patient could not retain the saliva, which flowed constantly over the wound, but she now possesses that power almost to its full extent.

Cork, May 10th, 1823.

PART II.

ANALYTICAL REVIEW.

I.

- ▲ *Treatise on Mental Derangement, containing the Substance of the Gulstonian Lectures for May, 1822.* By FRANCIS WILLIS, M. D., Fellow of the Royal College of Physicians. London, 1823. 8vo. Pp. 234.

MENTAL derangement, like any other term, may be used in whatever sense an author chooses to employ it, provided

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he gives a correct definition of its meaning, and strictly confines himself to his own definition. Much inconvenience, however, frequently arises when any term is employed by an author in a sense different from, and contradictory to its popular acceptance or to its etymological derivation; and in this case it is more particularly incumbent on him who thus changes the import and signification of a term, to be precise and accurate in the application of it. If these inconveniences are apt to arise, under ordinary circumstances, from the want of precision in language, how much greater must they be when the very meaning attached to the etymon itself is extremely vague, unsettled, and disputed, as in the present instance! scarcely any two persons agreeing in opinion of what constitutes MIND, and many even denying it to be any thing more than bodily organization. Dr. Willis seems fully aware of this difficulty, and has therefore declined to point out what constitutes mind, whilst he considers it, whatever it be, so intimately connected with the body, that they exert a reciprocal action upon each other, and are mutually affected by causes acting upon either.

It has been long keenly disputed whether maniacal disorders are to be ascribed chiefly to derangement of the intellectual faculties, independent of any primary deviation from a natural and healthy state of the body generally, or of the brain in particular; or whether such disorders are not in every instance the result of some previous alteration in corporeal structure, or produced by increased action of the vascular system, especially of that part of it which maintains the circulation in the cerebral organ. Much ingenuity has been displayed in the controversy, but no satisfactory result has arisen from the agitation of the question. It is probable that those who maintain these opposite opinions err only in restricting insanity to either of these states exclusively, and that the more correct notion will be found to consist in ascribing this disease in some cases to the mind alone, in others exclusively to the body. Whilst so intimate a connexion subsists between body and mind, it is to be expected, and is actually found by experience, that a deviation from sound health in the one will sooner or later greatly influence the other; but no satisfactory reason can be given why the original source of deviation should be exclusively confined in all cases to the one rather than to the other. The action of the two, body and mind, upon each other, is reciprocal; and as each is capable of deviation from a sound state, it is not more unphilosophical to ascribe, in some instances, the primary deviation to the mind, than to ascribe it to the body, when the exciting causes are such as can be applied *only* to

the mind in the first instance. There are those who deny that the mind can ever be acted upon, unless through the medium of the body; but it must not be forgotten, that although ideas can only be originally received into the mind by means of external impressions, they may, when once received, be so operated upon by the original powers of the mind, by the imagination, conception, and judgment, as to be variously combined, compared, and abstracted. Is it not the due adjustment of these various powers, in their exercise and operation, which properly constitutes sanity, whilst a preponderating influence of either of these over the others may be designated *mental derangement*?

Dr. Willis arranges himself among those who consider mental derangement as depending entirely on corporeal affection; that "instead of delirium, derangement, and insanity, being merely mental disorders, each of them must be, in fact, and in its origin, a bodily one;" and he asserts that, even when the disease is produced by causes operating primarily on the mind, no derangement takes place until some alteration has been produced in the body, which, it appears, by a kind of reflex action, occasions the mental disorder. We should no more have expected *à priori* that causes applied to, and operating primarily on the mind, and which ultimately produce disease of the mind, are incapable of effecting this without *first* disordering some of the bodily functions, than that bodily diseases could not arise from applications made to a part of it, unless some previous operation had been exerted on the mind.

As mental derangement is to be considered as primarily a disease of the body, so the cure, according to the author, is also to be attempted by means principally acting upon the body; this is consistent enough, and in the particular state of mental derangement here described such treatment is essentially requisite, since the accompaniment of bodily indisposition characterizes the complaint which is the subject of this treatise, the author limiting it to "cases of delirium and derangement *cum febre*." "To constitute derangement of mind, his (the patient's) aberrations must be attended with bodily indisposition."

That delirium is purely a corporeal affection we can readily admit, and we had always considered it as totally distinct from what is usually denominated mental derangement; but the author considers them as only different degrees of the same affection, adopting the exposition given before the Committee of the House of Commons by his grandfather, when examined on the case of the late King.

"In *delirium* the mind is actively employed upon past impressions,

upon objects and former scenes, which rapidly pass in succession before the mind, resembling, in that case, a person talking in his sleep; there is also a considerable disturbance in the general constitution, great restlessness, great want of sleep, and a total unconsciousness of surrounding objects. In *insanity*, there may be little or no disturbance apparently in the general constitution; the mind is occupied upon some fixed assumed idea, to the truth of which it will pertinaciously adhere, in opposition to the plainest evidence of its falsity; and the individual is always acting upon that false impression. In insanity, also, the mind is awake to objects which are present. Taking insanity, therefore, and delirium, as two points, I would place derangement of mind somewhere between them."

Had not this definition come from such high authority, we should have considered it as one of the most unsatisfactory we had ever seen: what are we to understand by *somewhere*? In proportion as this affection was placed nearer to either of these two states, it would partake of the symptoms of that state; it would, in fact, be merely a milder degree of that species. Can we place it in the precise middle point? This to us appears to be a state of health, for receding equidistant from two diseases to a point at which neither of them exists, can only bring us to a state of sanity.

It is time, however, to proceed to the practical part of the treatise. Mental derangement, accompanied by bodily indisposition, is divided by the author into the high state and low state, resembling the mania and melancholia of other authors; the causes producing these are the same, the difference depending more upon the constitution and natural disposition of the individual than upon any thing else. The proximate cause of the disease is some change in the condition of the nervous system, effected by the remote causes applied; the perfect regularity continually subsisting, both in the mind and the body, is to be attributed to a peculiar state of the nerves, which may be called the *tone*; an alteration in or deviation from this state of tone may lay the foundation for the disease in question. The remote causes are divided into those which act primarily upon the body, and those which act also upon the body, but primarily upon the mind. Among the former are, excess in drinking, typhus, continued puerperal and intermittent fevers, hysterical affections, copious blood-letting, a long course of mercury, especially in an irritable constitution, and frequent doses of opium. The latter description of causes comprises, the passions of the mind; sudden news, good or bad; enthusiasm in all popular commotions, and its consequences, with many others. Whichever of these sets of causes produces the disease, whether they primarily act on the mind or body, bodily disease takes

place previous to any mental derangement. The symptoms of the high state and low state respectively are well described by Dr. Willis; hurry, confusion, and restlessness, characterize the former; profound apathy and listlessness the latter variety. The increased vascular excitement of the vessels of the brain, so usual in the high state, is not considered a cause of the disease, but is itself occasioned by the altered tone of the nerves; and the altered structure of the brain and its appendages is the effect, not the cause of the disease.

“ That those symptoms which are usually termed symptoms of a preternatural activity, or an increased action of the vessels of the brain, such as pain and sense of fulness in the head, flushed cheeks, suffused eyes, and dilated pupils, are mostly present in those cases where delirium or derangement occur, I readily admit; that upon examination, after death, we find a turgescence of the blood-vessels, and much other deviation from the healthy state, I also admit; but that these, either separately or conjunctively, are the causes of the delirium, I should deem improbable.”—P. 82. “ Dissection has certainly disclosed, that turgescence of the vessels of the brain, and thickening of its membranes, take place in this complaint; hence the effect has been confounded with the cause, and hence phrenitis and inflammation of the brain have become synonymous terms; but would it not be very remarkable if the brain, the most delicate and essential organ in the body, exhibited no marks of disease after the constitution had suffered such agitation and disturbance as I have heretofore described.”—P. 111.

This opinion cannot but have a considerable influence in directing the practice in this disease, and we accordingly find that the author is led to highly disapprove of the depletory method commonly resorted to in this disorder, and he reprobates the indiscriminate use of blood-letting, recommending, on the contrary, a cordial and tonic plan of treatment even when the delirium is considerable. Many quotations are adduced in support of this view of the disease, although it certainly does appear that depletion has at least an equal number of advocates; but perhaps we shall render only justice to the author by giving a case, wherein, under his own management, the method here recommended was in itself successful.

“ The patient was a young lady, of a naturally irritable constitution, who having been in a very nervous state for many months, was, from domestic occurrences, thrown into a most violent delirium; on the sixth day from the attack of which she was placed under my care. With short intervals of cessation, she had been continually raving for four successive days and nights; labouring, at the same time, under such irritability, that four persons had been employed to watch and prevent her from getting out of her bed. While in this

state, and previously to her becoming my patient, leeches had been applied to her forehead and temples, cupping-glasses to the back of her neck, and a blister to her head; purgatives also were given; barley water, with weak broth, had been the only sustenance allowed. Her state, as I found it, was this: she had ceased to rave, probably from exhaustion, having been wholly without sleep; she had become obstinately silent, but was still in perpetual motion; her pulse was 130; her whole skin very hot, and completely parched; her face flushed and bloated; her eyes suffused with blood, and wide open; yet she could discern nothing; she was also unconscious of her evacuations; her tongue was brown; her lips and teeth covered with sordes. In attempting to feed her with a spoon, she clenched her teeth; if we succeeded in putting any thing into her mouth, she spit it out after keeping it there a moment; so that it was impossible to administer any medicine without using force. Had the lady died in this state, and dissection been desired, a turgescence of the vessels of the brain, water effused into its ventricles, or some other deviation from the healthy state, would probably have appeared. Her death might then have been attributed to one or more of these circumstances. Viewing this case differently, and, considering that she had been incessantly raving, till from exhaustion she could rave no longer; that she had not closed her eyes for five successive days and nights; that weak broth had been the only sustenance allowed her, I inferred, that although there might be some disease in the brain, either congestion of blood, or effusion of serum, the patient was necessarily nearly worn out, and her life in danger. Under this impression, therefore, I immediately ordered her two glasses of old port wine, and two hours afterwards three ounces of a decoction of bark with some of the tincture, as the only means of saving her life. In four hours from my first seeing her, she was in a sound sleep, but only for a short time. Upon her awaking, the same quantity of decoction of bark was again given, when she slept three hours together. On the following morning her life was comparatively safe; although she was still unconscious where she was, and took no notice of persons in the room, she no longer clenched her teeth or spit; but when breakfast was offered to her, she put the cup naturally to her mouth; and after obtaining more sleep from a continuance of the remedies, she was able to answer questions correctly; in short, her irritability began to subside, and her sense of feeling to return, in some degree, from the moment they were first applied."—P. 116.

As irritability forms a prominent feature in that state of derangement denominated the high state, medicines are to be administered to diminish this; and wine, bark, and musk, with henbane, hemlock, tartar emetic, and foxglove, are recommended for this purpose. If the irritability proceeds from weakness occasioned by blood-letting, puerperal fever, or typhus, bark will be found of the greatest service, after the bowels have been freely opened. Some caution is requisite

in administering these sedatives; opium is rejected by the author on account of its confining the bowels, and of its frequently producing watchfulness. Emetics are spoken highly of by the author, although their use has been forbidden by some Practitioners of no little eminence.

Although mental derangement is considered by Dr. Willis as entirely a disease of the body, and his reliance for the cure of it placed chiefly in remedial means acting on the corporeal system, he does not disdain to conjoin what has been called moral management of the patient. Having restored the tone of the nerves in some measure, the next care is to divert the patient's mind, from time to time, when awake, from its usual association of ideas, and draw his attention to other points. The means of doing this will be various, and must be regulated with reference both to the state and circumstances of the patient. When the state of derangement is violent, personal restraint becomes essentially necessary, and the strait waistcoat is recommended by the author as the most effectual and most humane method of accomplishing this. Success in the cure of this malady depends very materially upon the promptitude with which the remedies are applied. It was asserted by the late Dr. Willis, that in the species of this complaint denominated *delirium and derangement, cum febre*, nine out of ten patients recovered, if brought under his care within three months after the attack of the disease. The present author, adopting also this prognosis, professes to employ the same plan of treatment; and it must be conceded to him that he has fairly promulgated his principles and practice. The treatment in the low species of derangement does not materially differ from that recommended in the former one; in this species we recognize the symptoms of melancholia and hypochondriasis; the prognosis is more unfavourable, and the period required for a cure is generally longer than in the high state: one remarkable fact is mentioned by the author, that patients who fancy they are poisoned, or suffer internally, are less likely to recover than those who imagine themselves ruined in fortune or disgraced by crimes.

When the bodily indisposition has been cured, and the symptoms of mental aberration still continue, the disease is said to assume the character of insanity or lunacy. It is frequently difficult to detect this state of mind, and the author gives some directions for the conduct of the Physician in his examination of a patient for the purpose of ascertaining this point; for these we must refer to the work itself. Much praise is bestowed upon the different asylums appropriated to the reception of unhappy persons of this description, among

which the one formerly under the management of the author's late uncle, and still continued on the same plan, is particularly distinguished.

We could not but notice the anxiety of the author to remove a common prejudice existing in the public mind, that Physicians particularly conversant with, and eminent in the cure of the disorders of the mind, are not to be intrusted with those that ordinarily and exclusively happen to the body. He, on the contrary, contends, that independently of the occasional practice of the mental Physician in disorders exclusively of the body, his acquaintance, by means of his mental practice, with almost every variety of disorder to which the body is liable, renders him competent and able to prescribe to the complaints incident to both body and mind, be they of whatever kind or character they may. Surely when any set of Physicians monopolize to themselves a peculiar and lucrative branch of practice, they should be content to leave the rest of the field open to their brethren in general. The very assumption of superior eminence in the treatment of any one disease, should be considered a kind of voluntary restriction to the practice of that variety of complaint.

II.

Select Dissertations on several Subjects of Medical Science.

By Sir GILBERT BLANE, Bart. F.R.SS. Lond. Edinb. Götting.; Member of the Imperial Academy of Sciences of St. Petersburg; and Physician to the King. Now first collected, with Alterations and Additions; together with several new and original Articles. 8vo. Pp. 397. London, 1823.

THIS interesting volume was partially introduced to the notice of our readers, conjunctly with the abstract of the population returns, in the Number of the REPOSITORY for January. We now turn to it again, in order to take a view of the remaining original papers which it contains, and we do so with the greater pleasure, because we are aware that they will be received by the Profession with very general satisfaction, and that many will be also desirous of procuring, in a collected and improved form, those articles that were scattered through the transactions of societies, to which they may not always have ready access.

The volume consists of twelve dissertations. The *first* is "*on the comparative health of the British navy, from the year*

1779 to the year 1814, with proposals for its farther improvement."—The greater part of this essay appeared in the sixth volume of the Transactions of the Medical and Chirurgical Society. It discusses topics of great importance to the country. No one has contributed more than Sir Gilbert Blane to the introduction of those salutary measures into the naval service, which have given rise to its present improved condition; it consequently becomes a matter of interest, not only to medical men generally, and to the medical officers of the navy in particular, but also to those who plan and direct the operations of this important branch of the public service of the country, to be furnished with an extended view of the successive improvements which have conduced to this very salutary influence, by the individual who has been so instrumental in bringing it about.

Dissert. II. "*On the medical service of the fleet in the West Indies in the year 1782.*"—This article is original, and is a valuable supplement to the foregoing. It contains many interesting particulars, which we would recommend not only to the attention of naval medical officers, but also to captains of the navy and admirals. After describing several particulars connected with Lord Rodney's victory over Comte de Grasse in the West Indies, in 1782, Sir Gilbert offers the following remarks, which are physiologically correct:—

"It has been ascertained by long experience, that no refreshment but pure water ought to be allowed to the men during action; and the expediency of it has been established by the immemorial usage and uniform practice of the British navy. It has been equally ascertained by experience, that in all violent and even protracted bodily exertions, nutritious food and stimulant liquors, taken either immediately before or during such trials of strength, do not sustain, but exhaust the animal powers. This is particularly applicable to men in the heat of action." "Though cold water was the only refreshment allowed in time of action in the West Indies, it may be advisable in cold climates and seasons to add a very small portion of spirits, the very idea of which would give the men more confidence in their beverage." "On this subject it is an instructive remark, well ascertained by experience, that after excessive fatigue the strength is best and most safely recruited by a slender meal. I have known dangerous fevers brought on by full meals of animal food and fermented liquors in such circumstances."—P. 82.

Dissert. III. contains facts and observations respecting the Walcheren fever. The greater part of this article was published in the Medical and Chirurgical Transactions for 1812. Sir Gilbert was sent by government on a special mission to Walcheren, in the autumn of 1809, in order to ascertain the nature and causes of the sickness and mortality prevailing

in the British army. This article contains the result of his observations on that occasion, and is important both in a medical and in a political point of view. The concluding part of it embraces some interesting facts respecting marsh miasmata.

Dissert. IV. "On the comparative prevalence and mortality of different diseases in London." — This article is chiefly taken from the fourth volume of the Medico-Chirurgical Transactions; but many new facts and interesting illustrations are added in this republication. The following paragraph is calculated to excite the speculations of those who are desirous of tracing the connexion of cause and effect:

"There are five circumstances belonging to the seasons of this climate which affect health. 1st, It is found that in a severe winter a much greater number of aged people die; also of those who labour under chronic affections of the lungs, palsy, and dropsy, and of young children. 2dly, There is a greater tendency to pulmonic inflammation in the spring months, in proportion to the prevalence of the north-east wind, periodical at this season. 3dly, There is a greater tendency to cholera morbus in the end of summer and beginning of autumn, and this in proportion to the heat of the preceding summer. 4thly, There is a greater tendency to bowel complaints in general during all the autumn months. 5thly, The strength of the wind has an influence on health. Wind is the great ventilator of nature, and its effects have, perhaps, not been sufficiently appreciated. It is mentioned in Maitland's History of London, that for several weeks before the plague broke out in London, in 1665, there was an uninterrupted calm, so that there was not sufficient motion to turn a vane. Baynard, a contemporary Physician, confirms this fact; and the like circumstance is mentioned by Diemerbroeck, in giving an account of the plague at Nimeguen. At the season in which the last plague visited Vienna, there had been no wind for three months. It is evident that calms must favour the concentration of human effluvia, particularly in a crowded and uncleanly population; and by the concurring testimony of all authors, it was always among the poor and squalid that the plague made its first appearance, and amongst whom it was most prevalent and fatal." — Pp. 130, 131.

The concluding part of this paragraph assigns too much, in our opinion, to the accumulation of human effluvia, which takes place during a calm state of the atmosphere, and entirely overlooks an equal concentration of those insensible vapours, which are continually emanating from the soil, especially when acted on by a powerful sun and a high range of temperature, in conjunction with some peculiar state of terrestrial and atmospherical electricities,* and which are pro-

* We take this opportunity of adducing the following remarks on this subject, published by us about three years since, when noticing

gressively accumulating on the surface whence they generated, when the motion of the atmosphere is not sufficient to diffuse them through it, either in an horizontal or vertical direction, in a ratio equal to the celerity with which they are disengaged.

Dissert. V. "Remarks on the comparative health and population of England at different periods."—This article, which is original, was fully analyzed in the *REPOSITORY* of January.

Dissert. VI. "1. On the effect of large doses of the carbonates of potash in gravel, with remarks on their administration, particularly on the advantage of combining them with opium and other narcotics; also, on the virtue of opium in the case of diabetes and intermittent fever, and as an alexipharmick. 2. On the use of pure alkalies and lime water in disorders of the bladder, stomach, and skin."—The substance of this article was published in 1811, in the *Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge*, vols. ii. and iii.; but it appears to have received, in its republished form, some important additions. Sir G. argues, with great justice, in favour of the advantages which arise from the use of the vegetable alkali in calculous disorders, especially when it is combined with the *vinum opii* or *hyosciamus*. He also advocates the use of opium in ill-conditioned ulcers, chiefly on the ground of its subduing that morbid irritation which is the chief obstacle to the healing process. Sir Gilbert is disposed to prefer the potash to the soda, in calculous diseases, from the experience he has had of both remedies. He thinks that

the cause of diseases which are frequently epidemic during a warm state of the atmosphere.

If the origin of both diseases (endemic and epidemic fevers) be closely looked into, the former shall be found to be derived from the products of vegetable and animal decay floating in a warm and moist atmosphere; the latter to originate from these causes, in conjunction with the extrication, from an exposed surface, of the more subtile elements, necessary to the constitution of a rich soil, and from both orders of causes being connected with a peculiar state of the air, as regards its electrical condition, particularly favouring the production of these elements, as well as disposing the human system to their direct operation.—(See *Account of the Climate of the West Coast of Africa*.)

"May not the elements of a rich soil, and which nourish the vegetable creation, be volatilized when subjected to powerful solar influence; and, from forming new combinations, and being diffused in the air, or absorbed in the moisture existing in it, produce a noxious effect upon animal life; especially during respiration, when it is presented to the blood undergoing the decarbonizing process?"

as soda enters so largely into the composition of the bile, and is an element of the animal fluids, so it is more likely to be arrested in the course of the circulation, and diverted from the urinary organs.

Dissert. VII. "On infection."— This is an original and interesting article. The author uses the words infection and contagion, as entirely synonymous, with a preference to the former. He defines infection to be "a matter generated by disease, and which communicates the same disease to another animal;" he afterwards proceeds to view its distinctive characters. From this view he draws the following inference:

"From all that has been said, it seems deducible that there is not a secretion nor exhalation of the human body which may not be so vitiated as to produce diseases communicable to others by contact or respiration, under various fortuitous circumstances of concentration and stagnation, application and action; so that there may be new maladies awaiting our species, which are still to develop themselves under the endless combination of the incidents of human life, through endless ages to come." — P. 214.

The next subject connected with infection which Sir Gilbert proceeds to consider, is that which relates to the means of altogether extinguishing it, or, at least, of preventing its diffusion. This topic has been so frequently before our readers, that we shall now refer them to Sir Gilbert's judicious reflections respecting it. He concludes this paper with some remarks respecting the discrimination of disorders which are contagious from those which are not so. Upon this fertile field of discussion we cannot, at present, enter fully, and we will not incidentally.

Dissert. VIII. "On muscular motion; being the substance of the Croonian lecture. Read before the Royal Society, by the appointment of the President and Council, on the 13th and 20th November, 1788."— This article is well known to physiologists. We find several additions to this republication of it; these are not, however, so numerous or important as to require particular notice.

Dissert. IX. "On the yellow fever."— The greater part of this dissertation was published in the first edition of the author's work on Medical Logic. He informs us, at this place, that the same subject is noticed, but slightly, in the second edition; for he was then under the belief that the opinion of non-contagion had been nearly eradicated; but finding this not to be the case, he has deemed it his duty to repeat his efforts in asserting what he considers to be the cause of truth and humanity. We are disposed to think that the opinions in support of the essentially non-contagious

nature of yellow fever were never more ably advocated or more generally adopted than they are at present. Without entering into any analysis of this dissertation, which, indeed, we could not do without entering at the same time into discussion, we may remark, that much misapprehension on the nature of fever generally, and of the yellow fever particularly, has arisen from the circumstance that fever has been viewed by writers on it, and classed by nosologists, as embracing a certain number of species, which species they have all considered to be as distinct from each other as the objects which are usually classed by naturalists under one genus or order. Instead of taking this confined and artificial view of the subject, fevers may be considered, with greater propriety, as changes induced in the vital actions of the animal economy by the reciprocal influence exerted between the different kingdoms of nature, and between the individual classes composing each of these divisions, and by the agency of the more subtile elements which are constituents of, or which pervade the whole. As, therefore, fever ought to be viewed strictly in the character of the effect of certain causes arising from temperature — from moisture — from the states of the atmosphere or its constituents — from the condition of the electric fluids — from impure gases and vapours generated by vegetable and animal decomposition under various circumstances — from the volatile elements of the soil itself, extricated by the agency of electricity, a high temperature, the sun's rays, or by those causes combined — and, lastly, from the exhalations and secretions from the bodies of those labouring under disease; and as experience has informed us that each of those causes may separately, and unconnected with any other, excepting the particular condition of the individual at the time of his exposure, produce a paroxysm of fever of greater or less severity and duration; so we may justly consider that the phenomena of fever, being the effects of these causes, will vary and be more or less severe as these causes are more or less complicated or intense. Indeed, as their complication and intensity may exist in every grade, from the lowest to the highest, without presenting any sensible shade of difference, or any specific point of dissimilarity on which to rest a definition, which may be applicable to a particular combination of them only, so may the effects which they produce be as infinitely diversified, and may consequently evince every shade of difference from the slightest ephemeral fever to the most malignant epidemic, whose ravages have been recorded by ancient or modern writers. Hence, therefore, we may deduce the corollary, that as the causes of fever may be almost infinite in activity and in complication, so may their effects be equally diver-

aified, and rendered even more multiform by the temperament, constitution, habits, and circumstances of those affected.

If this inference be correct, — and we think that extended views of the nature of essential fever will fully confirm it, — we may farther contend, that no fever or epidemic, whether infectious or otherwise, among the many observed by the most experienced, or known to the most learned, if we except the exanthematous fevers, has continued to present the same unvarying features, and that all are as mutable as we can suppose effects to be which result from causes so diversified and complicated, and circumstances of the affected so varied, as those to which we have alluded. It may, therefore, be asked, since all the phenomena constituting fevers are so changeable, where shall we find characters that do not alter, and others that are strictly applicable, as determining the identity or dissimilarity of certain fevers or epidemics, that may not be applied with equal propriety to others? Indeed, it may be inferred that diseases of this kind, whether occurring in temperate or in intertropical climates, present the same or different phenomena, according as the nature, number, intensity, and complication of their causes are similar or dissimilar in both; and that the disease called yellow fever, as it appears in different regions and climates of the globe, either as an endemic or epidemic, is entirely indebted to such causes for its points of resemblance or difference, and not to any particular morbid poison from which it springs.

But to illustrate this subject more fully in reference to yellow fever: we can easily suppose a violent epidemic to be the result of the combined causes, heat, moisture, and terrestrial exhalations. When, however, these produce their effects, under circumstances favourable to their action on the animal economy, and an additional cause is brought into operation, namely, a morbid effluvia from individuals in disease, especially if such effluvia be concentrated, an effect is produced upon the constitution commensurate with the aggregate causes: but are we to conclude that, because the animal exhalation is added to the other causes previously existing, it was solely and essentially productive of fever? We cannot deny that it will occasion fever, when concentrated, or when other circumstances are favourable to its operation; but in such cases it is merely one contingent of, and superadded to, the causes which first produced the disease; for until fever was actually and fully formed, no febrile emanation or effluvia could be the result of it. As, however, the primary causes just instanced will subside sooner or later, the exhalation proceeding from those labouring under their effects will afterwards be insufficient of itself to produce fever, and consequently the ravages of the disease

will cease soon after the subsidence of those causes, of which it was the effect. Now this is exactly the succession of phenomena, and the evident relation in which they stand to each other, in that fever called epidemic yellow fever, especially as it is witnessed in temperate climates. But to revert for a moment to the subject of a morbid exhalation: it may be granted, without conceding a single point to the contagionists, that the concentrated effluvia may be productive of fever in those who, having been exposed to the previously existing causes, might, perhaps, have escaped their effects; but this by no means proves that the effluvia is essentially productive of the fever; it merely shows that those constitutions, which, for various reasons, might withstand the noxious influence of the other causes, although impressed by them to a certain extent, have their energies lowered by the morbid effluvia in such a manner, as to bring the constitution into that state which favours the operation of those causes with which it was previously imbued, and which, otherwise, might be insufficient of themselves to produce actual disease in the system; in like manner as an individual, if he be not subjected to any subsequent depressing influence, may be uninfluenced by those causes, in that grade of intensity in which they exist. But, not only may the exhalation proceeding from the diseased act in this manner; it may both dispose the system to be influenced by the actual causes of fever, and may, also, affect it conjointly with those causes.

At the same time that we thus endeavour to appreciate the influence of the morbid effluvia emanating under such circumstances of disease, as those which characterize yellow fever, and to state our belief that no infectious principle is thereby generated which could affect those who have not been exposed to the real causes of this fever, either when conveyed as fomites, or when applied by immediate or mediate contact in the apartment of the affected, still we will not deny the generation of infectious forms of fever under circumstances favouring the development of the principle which produces them, especially in temperate climates. Crowded prisons, camps, ships, besieged towns and garrisons, &c. furnish proofs of this form of fever; but as infection becomes manifested as a cause of fever, so the fever changes its type, and is no longer the same disease; thus furnishing an example of the relation which effects have to their causes, and elucidating the principle which we laid down at the commencement of these remarks.

It may be assumed, in illustration of this position, that a number of persons are exposed to certain causes not connected with infection, which produce in them continued

fever; that they are confined under circumstances calculated to generate a morbid poison productive of infectious fever; and that the principle thus generated causes fever in others, which perpetuates its kind until circumstances present themselves that diminish or destroy the noxious cause. But the febrile action, which is the consequence of the former set of causes, is no longer of the same kind as that which proceeds from the infection thus developed, but changes its character according as the former or latter is the sole, or the predominating cause of its production, or as both are more or less equally intense in their joint operation. Indeed, it even appears probable that an infectious principle, productive of fever, is sometimes generated, under certain circumstances, such as famine, putrid exhalations, and confined and extremely crowded situations, &c. independently of previous disease of any positive or defined form. But to return to the work now before us:—

Sir G. Blane argues most strenuously, and certainly more ably than any of his predecessors or contemporaries, in favour of the opinion which ascribes the production and diffusion of yellow fever to a contagious principle; but, as far as this disease is concerned, we can find no proof adduced, either by him or by any other writer, which is by any means calculated to invalidate the opinion we have just given on the subject. Sir Gilbert concludes this article with some notes on Dr. Bancroft's Essay on Yellow Fever, and with a few important remarks on the propriety of discrimination in the employment of venesection in many cases of this disease. That Practitioner, it must be evident, will be most successful in the treatment of this and of other disorders, who, unfettered by authority and preconceived opinions, proceeds upon an intimate knowledge of the operations and laws of the animal economy, and upon careful clinical analysis of morbid phenomena. This is the true source of a felicitous tact in practice; and from such source he will endeavour to adapt and to proportion his means to the ends intended to be fulfilled, and will ever be ready to assist or to control the operations of nature.

Dissert. X. "A statement of facts, tending to establish an estimate of the true value and present state of vaccination."—This interesting article has been so extensively circulated, and is so generally and well known amongst the Profession, that it is unnecessary to occupy our confined limits with a review of it: the want of room, also, allows us only to name the concluding dissertations of the volume: these are—*XI. "Narrative of a hurricane, with some reflections on the effect of commotion in the atmosphere and in the ocean on the*

economy of nature, and on life and health ;" and, XII. " On the effect of mechanical compression of the head, as a preventive and cure in certain cases of hydrocephalus."

We have perused the dissertations contained in this volume with so much satisfaction, that we would receive with pleasure a similar collection from the same quarter.

III.

Remarks on the Yellow Fever of the South and East Coasts of Spain; comprehending Observations made on the Spot, by actual Survey of Localities, and rigorous Examination of Fact at original Sources of Information. By THOMAS O'HALLORAN, M.D. Member of the Medical Academies of Madrid and Barcelona. London, 1823. 8vo. Pp. 208.

IN a former Number of this Journal, in a review of the indefatigable and intelligent veteran Jackson's "*Remarks on the Epidemic Yellow Fever,*" &c. of Spain, we expressed our sentiments so fully upon that disease, that but little is left for us to say upon the subject at present. In that article we stated, that the truly eminent individual whose treatise we were analyzing had adduced a conclusive statement against the idea of imported contagion in the epidemic of the year 1820 at Cadiz—the attainment of a knowledge of which epidemic was the object of that philanthropist's leaving this country, in order to study it at the seat of the disease.

Dr. O'Halloran's treatise, now before us, confirms that opinion as regards a similar epidemic which prevailed in Barcelona and some other parts of Spain, in the autumn of 1821, by a body of evidence as satisfactory regarding the non-contagion of the fever of his observations, as those brought forward by Dr. Jackson regarding the epidemic which he witnessed.* Dr. O'Halloran does not arrive at his conclusions until after unwearied assiduity, and careful examination of facts at the fountain head: for this purpose, he traversed the Spanish coast of the Mediterranean, in order to ascertain, by positive evidence, all the circumstances attending the origin of the disease in the different towns in which it appeared in the year 1821; and to collect, with scrupulous fidelity, such facts and cases from authenticated sources, as might tend definitively to determine what has hitherto been involved in doubt."

* Dr. O'Halloran accompanied Dr. Jackson to Cadiz, in 1820, and occurred with him in the opinions which he formed of the epidemic of that year.—See Review of Dr. O'Halloran's Account of the Andalusian Fever, in the REPOSITORY, Vol. XVI. p. 471.

Dr. O'Halloran enters at considerable detail into the medical topography of Barcelona, Tortosa, Malaga, Puerto de Santa Maria, Xeres de la Frontera, Lebrixa, San Lucar de Baromeda, with an account of the origin of the disease at these different places and at Cadiz, in the year 1821; and a chapter is specifically set apart for "general observations on contagion." His conclusions are so well summed up in the portion of the work dedicated to "general remarks," that we shall allow him to speak for himself, our limits not permitting us to adduce the important body of evidence from which he has logically drawn his inferences.

"From an impartial consideration of all the circumstances attending the epidemics of Spain in the year 1821, the conclusion is, I think, fairly deducible, that the disease was not, and is not occasioned by imported contagion, and that its origin cannot be attributed to the germ of a former epidemic, resuming original activity from the operation of a peculiar state of the atmosphere, without which it would remain dormant perhaps for ever.

"Fortunately for Spain, there now exists a great diversity of opinion amongst the Physicians and the enlightened part of the people relative to the cause of the yellow fever. This diversity of opinion (which owes its origin to the arrival of Dr. Jackson in Xeres) will continue to prevail for some time. The dismissal of prejudice is not the work of a day. Would the Spaniards permit themselves to draw conclusions from an accurate knowledge of the general laws of the epidemics of the Mediterranean coast of Spain, and from the nature, construction, and situation of the towns which have been severely afflicted by them, at various times since the year 1800, the conclusion, I think, would be irresistible; viz. that warm south-east breezes, unusual* drought, excessive heat, want of ventilation in the houses, exhalations from swamps, lakes, &c. and, above all, the malignant effluvia which arise from the decayed remains of putrid animal and vegetable matters, with which the majority of the

* "Nothing can produce a more deleterious effect on the constitution than the sirocco wind: its effects are sensibly felt by persons of all habits of body; and when it continues to blow for a length of time, it is generally succeeded by epidemics, in those towns and cities wherein the destructive emanations from filth, swamps, rivers, and lakes, are present to contribute their aid. The languor, which is occasioned by the enfeebling impression of the Levant or sirocco wind, can scarcely be imagined by those who have not felt its influence; it is so enervating at times as to produce faintness, even in persons of strong constitutions. When the breeze is strong, its effects are not sensibly perceived; but when it is gentle, particularly in the night time, it seldom fails to predispose to disease, by rendering the constitution susceptible of other morbid materials, which, without so powerful an auxiliary, might, in all probability, remain perfectly innoxious."

seaport towns of Spain abound, and which in calm and sultry weather, particularly in hot and oppressive nights, render the air impure, and offensive to the sense of smell, — are the causes which essentially influence or increase the activity of what may be called the *seminium* of epidemic yellow fever. It is evident that yellow fever does not arise from the injurious impression of local impurities; for, if it did, the towns of Andalusia would have been depopulated long since. But, although effluvia from local filth are not, in themselves, sufficient to generate an epidemic disease, the combination of these effluvia with morbid conditions of the elements will, most probably, be sufficient to bring it forth in extraordinary force. But where the local causes do not exist, although the elemental principle may be in existence, the effect is different. In sickly seasons, when epidemic influences prevail, the majority of the seaport towns and cities, whose situations are low and impure, and the form of dwellings bad, are more or less affected by epidemics of the yellow fever character: while, in the well-situated towns, where the local causes do not exist to a high degree, the ordinary diseases are increased in violence and number, and cases of yellow fever occur contingently, presumptively from the effects of heat; but epidemics of a minor grade, generally eruptive, such as measles, scarlatina, &c. are often conspicuous, and indicate, by their course and termination, that there exists something of general epidemic influence in the case. It was thus observed, that in the autumn of 1821, when the yellow fever raged in the cities of Barcelona, Tortosa, &c. &c. the towns in the vicinity suffered from eruptive maladies, catarrhs, &c.; and that the ordinary diseases, viz. intermittents, remittents, and continued fevers, became unusually malignant, and so general in some parts, particularly in Rosas and its vicinity, that the intermittent fever might have been said to be epidemic. In Andalusia, when the different towns of Malaga, Cadiz, Puerto de Santa Maria, Xerez, Lebrixa, Seville, and San Lucar de Barameda, were affected with yellow fever, in different degrees, the measles, scarlatina, &c. &c. raged, it may be said, epidemically, in Gibraltar, San Roque, Algeciras, Chiclana, Rota, Medina Sidonia, Chipione, Tribujena, Conil, Vejer, Arcos, Ronda, Puerto Real, &c.

“ In confirmation of what has been observed, relative to filth having a considerable share in the production and aggravation of the yellow fever, it may be necessary to state, that in the year 1821, all the towns and cities which suffered from the yellow fever, were, with the exception of Cadiz, filthy in the extreme, disgustingly so, and very objectionable on the score of ventilation, situation, and form of construction; while the different towns of Arens, Matro, Badalona, Tarragona, Vinaros, Benicarla, Valencia, Aliama, Velez, Malaga, Marabella, Estepona, Vejer, Conil, Puerto Real, Rota, Chipiona, Arcos, and Medina Sidonia, all of which are in the vicinity of the sea, and which, it may be presumed, from their relative situations, communicated freely with the theatres of disease, were not affected by the malady. They seldom, indeed, suffered in other years; because, independently of their localities being better chosen for health, they are comparatively clean.” — P. 184.

Dr. O'Halloran concludes his volume with the history of eleven cases of dissections. In some of these the eye was found to present marks of previous inflammatory action; and in others, abscesses were discovered in the kidneys, and, as he conceives, it is a most important point, as connected with the treatment, to ascertain whether or not the suppression of urine arises from inflammation, and its consequences. Our author calls the particular attention of anatomists to this most "important subject." The remainder of the appearances observed on the dissection of those who have died of yellow fever, as well as the various other phenomena attending the disease, have been so fully exposed in a previous article to which we have had occasion to refer, that we consider it supererogatory to enter into them at present. We cannot suffer ourselves to conclude, however, without expressing our opinion that Dr. O'Halloran's work will be found to contain much information interesting to the reader.

IV.

A Practical Treatise on the Symptoms, Causes, Discrimination, and Treatment of some of the most important Complaints that affect the Secretion and Excretion of the Urine, &c. Exhibiting a comprehensive View of the various Diseases of the Kidneys, Bladder, Prostute Gland, and Urethra. Illustrated by numerous Cases and Engravings. By JOHN HOWSHIP, Member of the Royal College of Surgeons of London; Société Médicale d'Emulation of Paris, &c., &c. 8vo., pp. 438. London, 1823.

THE diseases of the urinary organs have so lately and so frequently engaged our attention,* that it will be unnecessary for us to enter very fully into an analysis of the work now before us. We shall, therefore, content ourselves with discussing whatever topics it may present, which have not come under our consideration in the reviews to which we have alluded.

The *First Part* of Mr. Howship's work treats "*on the Diseases that affect the Secretion of Urine.*" Chapter I. of this part is "*on Suppression of Urine.*" The diagnosis of this state of function is distinctly described. After noticing, in a cursory manner, the pathological states of suppression, namely, suspension of the action of the kidneys, and obstruc-

* See the reviews of Mr. Wilson's work on the Urinary and Genital Organs, vol. xvii. p. 48; of M. Du Camp on Retention of Urine, vol. xviii. p. 257; and of Mr. Bingham on Diseases of the Bladder, vol. xix. p. 140.

tion in the ureters; and after stating this complaint to be either incomplete or complete, as one or both kidneys are affected, some of the more remarkable phenomena and instances of the disease are alluded to. The author now enters on the particular consideration of the varieties of suppression of urine, and the first that he notices—*Sect. 1*, is “*suppression from congestion in the blood-vessels of the kidneys.*” He considers external injury of the loins to be its most frequent cause; and the first consequence of injury of the kidneys to be the voiding of blood with the urine.

In the *treatment* of this form of complaint, “bleeding, either general or local, will be commonly required, unless the pulse and strength are deficient.” Should, however, the propriety of general blood-letting be at all doubtful, “the complaint may, perhaps, be relieved by the application of leeches, or cupping-glasses.” The bowels will require attention in every case. The author considers that active purgatives do not the harm, in this variety of the disorder, which has been attributed to them by some writers. “I have been,” he informs us, “more than once called to attacks of this description, in which the low state of the pulse, and still lower condition of the physical powers, required, from the first, every attention to the improvement of the digestive organs, aided by nutritious diet, with a view to restore a broken constitution; and this partially accomplished, the appearance of blood in the urine has ceased, while the quantity of the natural secretion has increased,” until it has returned to its healthy state, both as to quality and quantity. A case is detailed illustrating the pathology and treatment of this form of suppression, which, in this instance, arose from injury of the loins; local bleeding, the warm bath, aperients and blisters, were employed successfully. The propriety of prescribing blisters is discussed under the next head:—

Sect. II. “Suppression, from inflammation of the kidneys.”—The causes of inflammation of the kidneys are first noticed by the author; these it is unnecessary for us to enumerate. He very properly adduces gouty action as a frequent cause of partial suppression; and alludes to a case of complete suppression from gout, which terminated happily under Mr. Heaviside’s care; and was the only instance of recovery from this state he had ever seen.

“A general officer, walking home in a cold night, with gout in his foot, the complaint left his toe, and the next day, Thursday, with great pain in the loins, he made little water, on Friday less, and on Saturday none. On Sunday, with Sir Francis Milman, Mr. Heaviside visited him; he felt the abdomen, but found no tumour; requested to draw off the urine; he passed a catheter, and found, as he

expected, the bladder empty. Terebinthinate remedies were directed, and, on taking the third dose, the patient felt desire, and passed nearly a pint of water."

After noticing the opinions of Lieutaud and Desault on the pathology of this species of suppression, Mr. Howship considers its *treatment*: this consists of bleeding, generally or locally, warm bath, mild purgatives, emollient clysters, and a free use of mild demulcent liquids. "The application of blisters," he observes, "excellent in most local inflammations, are said, in the present case, to be hazardous, from the possibility of absorption; I have, however, frequently directed them, and almost invariably with advantage." He very properly recommends cupping on the loins, and opiates, as forming a most requisite part of the treatment.

Sect. III. "Suppression from calculi in the kidneys."—Mr. Howship considers that as calculi "produce their other ill effects through the medium of irritation, they operate on a similar principle in inducing suppression of urine." Here, however, irritation will be productive of "high vascularity of the membrane lining the cavities of the kidney, ulceration of its internal surface, or some farther injury." Mr. H. next adverts to the consequences of suppression of this secretion, namely, coma from serous effusion, and occasionally ascites, hydrothorax, &c. He supposes the reason of serous effusion taking place alone to arise from the state of constitution, necessarily connected with calculous complaints, being more prone to serous than to sanguineous effusion.

In the *treatment* of this kind of suppression, "when the attack has been preceded or attended by much pain in the loins, and those sympathetic affections denoting increased action, the depleting system must be adopted, with such qualification as the symptoms may suggest. These may be succeeded by either the milder diuretics, antispasmodics, or opiates. When very little, or, perhaps, no local pain is experienced in or about the loins, there may be no objection to trying the more powerful terebinthinate remedies, taking care, at the same time, to watch their effect attentively."—P. 16.

After detailing some cases illustrative of the foregoing section, Mr. Howship proceeds to treat of "*abscess and other diseases of the kidneys*" (*Sect. IV.*) The topics embraced under this head were so fully noticed by us in the review, in our 97th Number, of Mr. Wilson's work, and in subsequent Numbers of this Journal, that we shall make no farther allusion to them, than to state that they are viewed by Mr. H. in a full and satisfactory manner, and the cases which are adduced elucidate both the pathology and treatment.

Chap. II. "On the morbid appearances of the urine."—*Sect. I. "On the appearance of blood in the urine."*—"Blood

passed by the urethra, may be derived either from the kidneys, the ureters, the bladder, or the urethra." Where bleeding proceeds from the kidneys, it generally arises from renal calculi, but it may take place from a relaxation of the capillary vessels, similar to what takes place in scurvy, which state of the vessels may be independent of, as well as dependent on, a scorbutic diathesis; it may also proceed from a fungous tumour growing from the internal surface of the pelvis of the kidney. "A discharge of blood perhaps never takes place from the ureters, unless, from the previous irritation of calculi, they have become highly vascular, and then suffered injury; in a healthy state, their supply of blood is not such as to furnish the means of notable hæmorrhage; but where the patient labours under cancerous or fungous disease of the bladder (cases 35 and 36), or where an enlarged or varicose state of the vessels about the neck of the bladder exists, bleeding may at any time arise."—P. 52. After noticing the symptoms by which we are to infer the seat of hæmorrhage, and the appearances which the blood in the urine exhibits according to the situation in which it was poured out, Mr. Howship confirms the observation of Desault, that blood extravasated in the urethra will occasionally flow backward into the bladder, and will then induce another set of symptoms, and thus be very apt to mislead the judgment.

"When any quantity of blood has flowed into the bladder, unless voided immediately, it forms a coagulum, and the efforts at expulsion will then fail. In this state of things, the retention of urine is not the least common, nor the least serious consequence." The author alludes to several excellent cases of this description, and afterwards remarks, that "the serious importance of hæmorrhage from the urinary organs is rarely derived from the quantity of blood; it generally consists in its forming an indication of the existence of some particular disease, which is in itself of a serious nature." The existence of a coagulum in the bladder may be suspected, "when the appearance of recent blood in the urine quickly subsides, giving place to a heavy chocolate-coloured sediment, while the irritation, and frequent desire to void urine, continues." Mr. Howship considers that "the presence of a large coagulum seems occasionally to operate, by exciting a peculiar irritation, inducing suspension of the secretion of urine, and thus destroying the patient."

The treatment of bloody urine must always depend upon the nature of the morbid affection of the kidneys, ureter, bladder, or urethra, from which it proceeds. The curative

means, therefore, best calculated to remove or relieve such affection, ought to be employed. For the purpose of dissolving a coagulum when formed in the bladder, and enabling it to flow off with the urine, Mr. H. recommends the bladder to be injected with warm water that is slightly alkaline, in the manner advised by Desault. After having examined the bladder above the pubes, and by the rectum, Mr. H. also recommends to pass a small-sized catheter into the bladder, and endeavour to break down the coagulum. He concludes this section with some remarks on the danger of small coagula becoming nuclei of calculi, and on the coloured appearance of urine from the use of certain vegetable substances. Three instructive cases are appended to this section.

Sect. II. "On the appearance of pus in the urine."—Mr. Howship commences this section by expressing his scepticism of the justness of the observation of Desault, that pus is sometimes removed from an abscess, and afterwards discharged with the urine. "The opportunities of examining urine in which the matter deposited is, properly speaking, purulent, are generally in cases where the fact is already rendered clear by the other symptoms; and, consequently, the determining the nature of the deposit becomes unnecessary." Mr. H. offers some remarks on the manner of ascertaining the presence of pus in the urine, and afterwards concludes this section with observing that the treatment of this derangement must be influenced, in every case, by the seat and tendency of the complaint of which it forms an indication.

Sect. III. "On the appearance of albuminous matter in the urine."—Mr. Howship has brought forward nothing beyond what has been previously adduced by Dr. Prout,* Mr. Wilson, and others, on this subject. He has, however, been minute in his description of the appearance of the albuminous deposit from the action of different chemical agents. The treatment of a symptomatic disorder like the present, which supervenes to various and opposite states of disease, cannot be laid down with precision; the Practitioner must combat it by means that are appropriate to the pathological phenomena with which it may be connected. Mr. H. experienced great service in one case, from the use of the recent citric acid, wherein other remedies were useless. For farther observations on this variety of complaint, we must refer our readers to the work before us, and to the reviews of Dr. Prout's and Mr. Wilson's works, in our fifteenth and seventeenth volumes. This section is illustrated by two good cases.

* See the review of Dr. Prout's work, in Vol. XV. of the *Repository*, p. 398.

Sect. IV. "On the appearance of gravel in the urine," and Chapter III. "On urinary calculi," including the "*sections on calculi in the kidneys, on calculi in the ureters, and on calculi in the bladder,*" are discussed by Mr. Howship in a satisfactory manner, upon the whole, as far as his remarks go; but as these topics have been so fully considered in the reviews just alluded to, it is unnecessary to occupy our limits with an analysis of Mr. H.'s observations respecting them. We will, however, extract the following result of his experience of the effects of alkalies on the bladder, taken from the section on calculus in that viscus:—

"226. The influence these remedies are capable of exerting in these cases, extends, I believe, far beyond the mere prevention of excess of uric acid in the urine. There is sufficient evidence that they possess a decided power in lessening irritability of bladder, and of allaying its excitement, even where it has proceeded to the extent of inflammation.

"227. Examinations after death, where a calculus that had long tormented the patient has become harmless, either spontaneously or from using alkaline medicines, have shown that the stone has become harmless by the bladder forming a pouch, into which the cause of irritation has been received (202). The state of the bladder also, where alkalies have been exhibited, is entirely changed, for instead of being found, as dissection teaches every irritable bladder must be, contracted, thickened, and highly vascular, it frequently appears larger than common, relaxed, soft, and pulpy, and sometimes even gangrenous internally; not that gangrene supervening upon excessive action, but a chronic change derived from extreme debility in the vital powers of the part, and totally unconnected with any appearances of preceding excitement, effused lymph, or ulceration of the inner membrane. The result of Mr. Watson's experience upon this point was, that a person long afflicted with stone, if he has taken solvents for any continuance, generally has a very tender, relaxed, and weakened bladder; which should be considered, and every examination with metallic instruments be conducted in the most gentle and careful manner."

We were not a little surprised to find, in a work professing to convey a full account of the nature and cure of the diseases of the urinary organs, and at the place where the author is endeavouring to give a full description of the modes of treatment, and of operating in calculous disorders, no farther mention made of the method of extracting calculi, not only from female but also from the male, lately introduced into practice by Sir Astley Cooper, than the following:—

"264. Should the symptoms of stone in the female require the extraction of a calculus from the bladder, the first point of regard will be to allay irritation, if present; *after which, the urethra may be relaxed by one of those instruments ingeniously contrived by Mr. Weiss, of the Strand, for this purpose*; and when the operator has thus been

enabled to determine the figure and magnitude of the calculus, by examining it with his finger, he will more readily decide whether a partial division of the neck of the bladder, or further dilatation only, will be expedient for finishing the operation."

This is excellent, and is altogether a fine piece of character, viewing it as a connoisseur would a picture. The author has, perhaps, not seen the eleventh and twelfth volumes of the Transactions of the Medical and Chirurgical Society, although he is a member, and quotes both these volumes in the next and succeeding pages.

Sect. 5th. "On irritable bladder."—This subject was so lately fully considered in the review of Mr. Bingham's work on the Diseases of the Bladder,* that we cannot now revert to it. Eleven very long cases are appended to this section, which illustrate the relations of this variety of the complaint, as well as the views of the author.

Part II. "On the diseases that regard the excretion of the urine." *Chap. I. "On incontinence of urine."*—Mr. Howship recommends for the incontinence that occurs in young subjects, and where it is induced in adults by excessive debauchery, or by a slight paralytic affection, the tinct. lyttæ internally, and the application of a blister to the loins, "or, if that fail, to the perineum, the blister being for some time kept open, and dressed occasionally with the unguent. lyttæ. The object is to keep up a degree of irritation at the neck of the bladder during a certain period, by which the parts are roused into action."—P. 205.

Chap. II. "On retention of urine." *Sect. 1st. "On retention of urine in the ureters."*—Mr. H. refers to several interesting cases recorded by authors, and one that came under his own observation, where this state of disease was observed. He justly observes, that opinions respecting its real nature "can, however, rarely go beyond conjecture; neither would it often lead to advantage, were it otherwise, for medicine frequently can perform but little, and surgery still less, in relieving the symptoms."

"On retention of urine in the bladder."—The author refers retention in this viscus to three general heads: "First, those affections in which the coats of the bladder are deprived of their contractile force, from age, excess, the abuse of diuretics, affection of brain or spinal marrow, over-distention, inflammation or spasm of bladder, &c. Second, affections from causes within the cavity of the bladder, fungous tumour, coagulum of blood, extremely tenacious mucous or albuminous matter, effused from its inner membrane, &c. Third,

affections, the consequence of displacement either of the bladder or other viscera, producing pressure on the urethra or tumours, which, in their development, produce the same effect. Rupture of the bladder from external violence, an accident unconnected with external wound, but attended with some of the appearances of retention, will be lastly noticed."

Sect. 2d. "On retention, from age." — This kind of retention is rarely complete; "it generally admits of the urine being voided in the same quantity as secreted, and is, therefore, seldom productive of serious consequences." It passes on without regard, "being considered as an infirmity natural to age; while the urine, too long detained in the bladder, becomes putrid, and eventually reduces the inner coat of the bladder to nearly the same state. The indications in this case are to evacuate the urine, and to restore the tone of the bladder; both purposes being sometimes answered by the regular use of the catheter. In the early stages of this complaint, the sudden application of cold to the surface of the body is frequently effectual in enabling the patient to void his urine." Mr. H. goes on to observe, that, at this period, it is important to attend to the first inclination that occurs to pass water, as every hour of delay tends still farther to disable the bladder from assisting itself.

"369. Diuretics and balsamics, cold bathing, stimulating applications, and even astringent injections into the bladder, have all been recommended and used, without benefit. The only dependence is on the catheter; where this fails, no other means succeed."

Sect. 3d. "On retention from paralytic affection." — This variety of retention may arise from the debility of advanced age, and at any period of life, "from the operation of accidental causes, diminishing or destroying the nervous energy, by which the muscular coat of the bladder is enabled to contract." It frequently occurs as a consequence of injury to the spine. Violent twists of any part of the spinal column, producing effusion of blood on the theca vertebralis, or effusion of purulent matter within the theca, are occasional causes of this complaint: Mr. H. refers to two cases of the latter occurrence. Retention frequently arises from over-distention of the bladder, where the patient has too long neglected to evacuate its contents.

"380. In the treatment required in affections from injury of the vertebral column, local bleeding, blisters, setons, or caustics, near the seat of the injury, include all that aid which surgery can administer, where dislocation is not present. In addition to these means, proper medicines should be directed, where feverish indisposition is present; which attentions will sometimes prevent inflammatory effusion and its ill consequences."

There are at least two topics connected with retention from injury to the spine, which the author has left untouched, namely, the ammoniacal state of the urine in those cases, and the proneness of the bladder to an inflammation, which speedily terminates in gangrene, when the urine has been retained from this cause. Where two such important phenomena have been entirely overlooked, they consequently could not be explained. In developing the pathology of the bladder and its connexions, it has been generally overlooked that this viscus is supplied with two sets of nerves, whose functions are distinct, namely, the voluntary and involuntary: that the former runs chiefly, but not entirely, to its neck and parts adjoining; that, in injury of the spine, the former only suffers, while the functions of the latter are but little impaired. Consequently, as all the sensations which depend upon the voluntary set of nerves are lost, in proportion to the extent of compression at their origins, the bladder becomes over-distended without the sensations accompanying such a state being conveyed to the brain. But, not only is sensation not transmitted, volition also cannot be conveyed by the medium of the voluntary nerves of this viscus, and hence the distention destroys the tone of its coats, which has been already impaired by the loss of one half of its nervous energy, without any effort at evacuation being made by the patient. To remove this distention the catheter is the only means; but it cannot draw off the whole of the urine while the bladder is entirely deficient in contractile energy; and even under the most favourable circumstances, it can seldom remove completely the contents of this viscus; consequently, the portion left undergoes the change natural to it when out of the body, which is heightened by the high temperature to which it is subjected while it remains within. The irritating qualities that are thus generated excite the vessels on the villous surface to throw out an additional quantity of mucus: this, in a great measure, remains as a sediment in the urine which the catheter does not remove, undergoes putridity, which, with the ammoniacal properties thus evolved, farther irritates the bladder, which irritation, although not felt for the reasons just stated, runs on to inflammation, because inflammation and the other phenomena of the vascular system depend upon the involuntary nerves which are unimpaired, and are entirely independent of the voluntary, which are the seat of injury. Inflammation supervening under such circumstances soon terminates in a dissolution of the textures, owing, in some measure, to that loss of energy arising from over-distention, and to the defect of a portion of the wonted nervous influence, as before stated. It may be

objected to this explanation that no urine is left by the catheter. How can it be otherwise, when the catheter lies in a loose and uncollapsing sac, as the bladder is in injuries of the spine? Let, however, the Surgeons look to the matter; but we can assure them that we have often had satisfactory proof of the circumstance. How, indeed, can it be different in the usual position of withdrawing the urine? If any one be satisfied that no urine is ever left behind a catheter, the irritating urine must, in his opinion, be secreted in that state by the kidneys, owing to some perverted action which these organs have acquired as a consequence of the injury. But to return to our author:

Sect. 4th. "On retention from inflammation of the bladder."

— Mr. Howship notices the discrepant opinions entertained respecting the pathological state of the muscular coat, in inflammation of the bladder, without elucidating the point. Desault considered that when the muscular coat is inflamed, distention and inability to contract are the consequences; and he fortified his opinion by facts and analogical reasoning. Desault's name, if we were a worshipper of names, would appear to us worth some scores; but, independently of authority, we think him in the right. He saw much and observed closely:—the latter circumstance is no small virtue; the former may fall to the lot of any one, but how seldom is it joined to the qualities which characterized this great Surgeon! We think that we may state, from the best sources of information, that when either the peritoneal or mucous coat of the bladder is inflamed, the muscular coat is in an irritable and contractile state. When the inflammation is seated in either of those textures, the connecting cellular texture generally partakes in the derangement, and lymph is infiltrated in its tissue; hence the bladder becomes thickened and often contracted. When, however, the muscular coat is inflamed, an opposite state of this viscus is generally found on dissection: it is lax, distended, loose, and pulpy in its texture; and although the inflammation may commence, as we have shown, in the mucous surface of the bladder, when it becomes inflamed after injury to the loins, the muscular coat generally partakes of the disorder, and even becomes its chief seat.

The other derangements whence retention may arise are formally divided by Mr. Howship into distinct sections: these we will merely enumerate:—5th, Retention, from gouty spasm at the neck of the bladder; 6th, from strangulated hernia; 7th, from tumour, or other growth, within the bladder; 8th, from hernia of the bladder; 9th, from displacement of the viscera of the pelvis; 10th, from pressure of the

womb on the neck of the bladder ; 11th, from pressure of the rectum on the neck of this viscus ; 12th, from rupture of the bladder ; 13th, from inflammation of the urethra (sect. 14th, on gonorrhœa) ; 15th, retention, from contusion of the urethra ; 16th, from tumours in the scrotum, perineum, or penis ; 17th, from enlarged prostate gland ; 18th, from spasmodic stricture of the urethra ; 19th, from permanent stricture ; 20th, retention of urine within the prepuce ; and, 21st, on the puncture of the bladder. The whole of these sections are succinct and satisfactory ; occasionally, however, the cases are more numerous and longer than necessary ; especially those illustrating the sections on enlarged prostate and on spasmodic and permanent stricture. Retention of urine from stricture of the urethra has so lately been a subject of review * in this Journal, that we cannot now enter on it.

We must now dismiss Mr. Howship's volume. His observations are written in an aphoristic manner, and are occasionally expressed with so much ellipsis that they sound harsh, and are even ungrammatical. The pathology and treatment which the work displays seem, upon the whole, unobjectionable, and are, moreover, illustrated with ninety-one cases and four engravings : the topics which it embraces are viewed in an extended manner ; but not in such a way as to reach the standard of excellence, which many have in their power of attaining. It may be said that our standard is placed too high — it may be so : others place it too low ; but we prefer the odium attached to the one extreme rather than that which follows closely on the other. If, in endeavouring to pursue a moderate and even course, we shall lapse into any extreme, we know which to choose ; but even then we know the grounds on which we shall form a judgment. Medical judgment, however, is like taste ; neither can be formed after any absolute and immutable standard : the former must be always, in a great measure, comparative, and have an intimate relation to the state of science in general, and of medical science in particular ; not, however, according to the existing state of these sciences in a single kingdom or district, but with reference to the actual manner of their cultivation at the time in those countries that have essentially contributed to their advancement.

* See review of Ducamp on Retention of Urine in the *REPOSITORY*, Vol. XVIII. p. 257.

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS
IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

I.

Observations relatives aux Perforations spontanées de l'Intestin, grêle dans les Maladies aiguës, suivies de quelques Réflexions. Par M. LOUIS, D.M.P.

Cases relative to the spontaneous Perforations of the small Intestine, which take place in acute Diseases, followed by some Reflexions. By M. LOUIS, D.M.P.*

IN the two last Numbers of the Repository, we drew the attention of our readers to the subject of perforations of the intestines, as comprised in a valuable communication by Dr. Andral, "*On the Pathological Anatomy of the Digestive Canal, &c.*" The consequences produced by these lesions are of the most serious nature; and although, after they have taken place, there is but little probability of any means being successful, as a matter of diagnosis and prognosis, it becomes of the greatest importance to endeavour to make ourselves acquainted with the symptoms which generally indicate their supervention. Seven cases of this, we fear, incurable affection are given by M. Louis, all of which occurred within the space of seven months; so that in all probability it may not be so uncommon as has been imagined. These cases occupy so much space (upwards of twenty-four pages), that it will be utterly impossible for us to lay them before our readers; but this loss will be but little regretted, as the appended "*Réflexions*" recapitulate every thing of importance. These *Réflexions* we shall give nearly in the language of M. Louis.

The patients who were the victims of this lesion, were young and in full vigour; and, with the exception of the first, who was somewhat weak, and of a lymphatic temperament, they were of good constitution, rarely sick, not addicted to any excess, and possessed the attributes of the sanguine or bilious, or lymphatico-sanguine temperament.

* Archives Générales de Médecine, Tome I. Janvier, 1823.

The apparent causes of the disease were unknown or slight.

It commenced in all the cases as a slight continued fever, and in almost all no severe symptom occurred prior to the period of the perforation. Diarrhœa was only considerable, and of long duration, in one individual; it was moderate in another—less still in a third; and the remaining four were exempt from it.

One of the patients, he in whom the diarrhœa was so intense, experienced no pain in the abdomen; the others were similarly circumstanced, or felt it only at intervals, and commonly in by no means a severe manner. Four believed themselves convalescent, and had been considered so for some days, when the first symptoms of perforation manifested themselves, and a fourth laboured under slight enteritis, which there was every reason to expect should have yielded quickly. So that, in these four subjects, the lesion under which they succumbed, could not be anticipated; and moreover, it would have appeared absurd, from the mildness of the symptoms, to have suspected the occurrence of any serious accidents. In fact, after having studied the history of patients who have died of acute perforation of the intestine, we should not be more capable of foreseeing it, the precursory disease not having any symptoms, or a progress proper to it.

It is not possible to fix in a certain manner the period at which the ulcerations commenced; but supposing (what, perhaps, is not far removed from the truth) that they arose with the first symptoms of the disease, they had a tolerably rapid progress, and arrived at their fatal termination in from twelve to twenty-five days. In one case only the course of the disease seems to have been more tardy.

Notwithstanding the identity of the cause which gave rise to the peritonitis and to death, the phenomena produced by it were not constantly the same. In five of the seven patients, it is true, the perforation was accompanied with a sudden and lancinating pain, and with rapid alteration of the features, soon followed by nausea and vomiting; but of the two others, the one at first experienced a pain too slight to indicate its source, and to explain the appearance of the other symptoms. It did not arrive at its greatest intensity until twelve or fifteen hours after its first appearance; and as for the other patient, the delirium, which in all probability manifested itself at the very moment of perforation, doubtless prevented the pain, and the other signs of acute peritonitis, from showing themselves. It was, however, from the sudden appearance of pain in the abdomen, and its being exasperated by the slightest pressure, from the sudden collapse of the features, &c., that the

nature of the accident was suspected by MM. Lermnier, Chomel, and Martin Solon, the Physicians under whose care some of these cases occurred; and these symptoms were only wanting in one of the cases, in consequence of the delirium, and as they are, moreover, those of violent peritonitis, we may regard them as pathognomonic symptoms of perforation. So that if, in an acute disease, and *under circumstances perfectly unexpected, a violent pain in the abdomen should suddenly supervene, and that pain be accompanied with great sensibility on pressure, with speedy decomposition of the features, &c. and other symptoms which belong to intense and acute peritonitis, we may believe and announce that there is perforation of the intestine.*

The most acute pain of the abdomen, supervening suddenly, supposing it even accompanied with alteration of the features, nausea or vomiting, would be insufficient diagnostics; exacerbation of the pain on pressure is indispensable. A case of this sort we lately witnessed, with Dr. Chomel, at the *Hôpital de la Charité*. A female, in a state of confirmed phthisis, was attacked with the symptoms mentioned above, but without the pain being increased on pressure. Two days afterwards she died. On dissection, no appearance presented itself, except a number of lenticular red spots in the whole extent of the mucous membrane of the colon.

The most formidable symptoms are commonly so much masked by delirium, that so soon as it manifests itself, it renders the diagnosis of those diseases which are easily known difficult, and sometimes even impracticable. Thus, the subject of one of the cases to which we have referred died, without the nature of the accident which caused his death having been recognised. Nevertheless, even in this circumstance it was not, perhaps, impossible to have discovered the perforation; for, in the midst of an acute disease, of a tolerably severe diarrhœa, the patient had been seized with a violent shivering, which continued until death: and a shivering supervening in an acute disease, is commonly the signal of a new affection. Moreover, he winced when a certain pressure was exercised on the abdomen. From these symptoms, might not a perforation have been suspected? We do not believe that that would have been impossible; and we think that, if in an acute disease, with diarrhœa, or in a continued fever, *accompanied with abdominal symptoms*, the patient is suddenly seized with delirium and shivering, with slight *sensibility of the abdomen* (recognizable by the grimaces excited on pressure), *which, until that time, had not been painful*, we should be authorized to suspect perforation of the intestine. It is clear that in this case, in order to recognise the accident, there must have been, anteriorly at least, a little diarrhœa, without

pain of the abdomen; since, without previous diarrhoea, there would have been no reason to suspect perforation: and, in cases where there has been sensibility of the belly before perforation, slight pain, indicated by the winings when the abdomen is pressed upon, could be of no consideration.

Between two of the cases there is this analogy — that the moment of perforation appears to have been in them the signal for delirium: in a third it did not occur until the final termination, and in the other four it was wholly absent.

The time which intervened between the first symptoms of perforation and death, varied from twenty to forty-eight hours. The weakest of the individuals struggled but for a short time; the agony of the others was more prolonged.

It is unnecessary to say, that if experience and the well-known character of a disease are sufficient to establish the prognosis, it must be, in the case of which we are treating, constantly mortal.

The treatment of the disease before perforation was the same in all the cases, at least with scarcely any variation. Blood-letting, general and local, was employed to a greater or less extent; leeches were applied more or less in the vicinity of the pained part, without our being able to attribute to the use of these different methods the least influence over the progress of the disease, and the more or less rapid manifestation of the mortal accident. The antiphlogistic method was vigorously employed in one of the cases; in him the course of the disease was one of the most rapid.

What we have said on the subject of prognosis after perforation, sufficiently indicates that the treatment can then only be directed to the diminishing of the pains by local blood-letting, emollients, gentle anodynes, &c.

As to the *appearances of dissection*, we shall merely point out what relates to the intestine and peritoneum.

In almost all the individuals, there were, in the small intestines, ulcerations with and without perforation. In all, the chief were situated in the ileum, very near the cæcum; that is to say, in a situation corresponding with that to which the pain had been most commonly referred during life. In all, the perforation was in the centre of a more or less extensive ulceration, circumscribed by the mucous coat, and the bottom of which was formed by the muscular coat, covered with a thin lamina of cellular tissue. In almost all the cases, the circumference of the ulceration accompanied with perforation was smooth, the mucous, cellular, and muscular membranes having preserved their natural relationship; the mucous membrane, commonly pale, and scarcely at all thickened, could be easily raised from the subjacent cellular membrane; it seemed,

in the majority of cases, as if the perforation had been mechanically performed with a punch. The ulceration found on the mucous membrane of the stomach of one of the subjects, presented these characters in a still more striking manner; for there was nothing, either in the thickness or in the colour of the mucous coat surrounding the ulceration, which could distinguish it from that covering the healthy parts.

Ulcerations without perforation do not differ much from those *with* (allowance being made for the last circumstance), except by the presence, on their circumference, of a more or less projecting morbid growth (*bourrelet*), formed by the development of a particular substance in the *aréoles* of the sub-mucous cellular tissue, or by the thickening of the mucous membrane itself.

These two kinds of ulceration were not the only remarkable lesions of the small intestine. There were two others not less worthy of attention. These were species of patches, from six to twelve lines in their greatest diameter, forming two very distinct varieties. The first, produced by the development of a particular substance in the *aréoles* of the sub-mucous tissue resting on the healthy muscular membrane (itself sometimes more or less profoundly altered), were with or without incipient ulcerations; in the latter case, the matter of the patches was of a good consistence, reddish, slightly resembling pale lymphatic glands when cut into; whilst around the incipient ulcerations, it was softened, more or less friable, and perfectly resembled that which formed the internal surface of the *bourrelets* of the imperforated ulcerations. The other patches, much less thick, of a very different appearance, grayish, and spotted with blue, differed essentially from the former, the projection which they formed, being owing to an increased thickness of the mucous membrane; but they approximated each other by the presence of a more or less considerable number of ulcerations in all their stages.

This simple exposition of facts seems to us the faithful expression of the progress of nature in the production of acute perforations of the intestines, at least in certain cases. At some period of their existence, both species of patches become ulcerated; the ulceration extends in breadth and depth, so that after a longer or shorter time, the base of the ulcer found formed by the muscular membrane still covered by a lamina of cellular tissue, and its circumference by an elevated ring [*bourrelet*] of the nature of the patch to which it belongs, until, by the farther progress of the ulceration, the *bourrelet* disappears more or less completely. Under such circumstances, if the muscular membrane be primitively or consecutively dis-

organized, perforation takes place; in the contrary case, cicatrization takes place.

It is highly probable, that in the majority of the cases, perforation only took place, from a consecutive alteration of the muscular membrane; for, with the exception of the redness which existed in several cases, the muscular fibres, forming the edge of the perforation and the base of the ulcer, were healthy: and moreover, near the perforation described in one of the cases, there was an ulcer, the base of which was formed by the healthy muscular membrane, deprived of cellular tissue at its centre, and reduced to an extreme state of tenuity on the part corresponding to it; so that perforation was here on the point of taking place, in a part where the muscular membrane presented no appearance of organic lesion.

It would be doubtless very important to know under what circumstances the patches which we have described developed themselves; the means of preventing them, and the signs which indicate their more or less advanced state of ulceration; but if these problems can ever be resolved, it will certainly not be until a future period, and after the collection of a great number of cases.

We must not forget, however, that these ulcerations had no bad smell, which could give the idea of gangrene; that they were pale, without traces of blood, &c., in such a manner that it was not possible to regard them as the product of inflammation, terminating in gangrene.

In all the patients the mesenteric ganglions were of a considerable size, and generally of a deep colour, and good consistence.

In every case the mucous membrane of the colon was healthy, even in the individual who had been affected with severe and incessant diarrhœa.

The disorders following perforation were so perfectly similar in all the cases, that it is useless to dwell upon them.* We may only remark, that the fluid effused into the pelvis, and into the flanks, mixed with a certain quantity of the contents of the small intestine, had, even from that circumstance, characters different from that which is the result of common peritonitis.

M. Louis concludes his observations by remarking that he has abstained from all theoretical considerations in the preceding communication, his sole object having been to draw attention to a subject almost unknown, and of which the knowledge which we do possess is entirely owing to the progress of pathological anatomy.

* These symptoms our readers will find detailed by M. Andral at pp. 343 and 425 of the present volume of the *REPOSITORY*.—Eds.

II.

Researches on the Pathological Anatomy of the Digestive Canal, considered in its Sub-diaphragmatic Portion. By M. ANDRAL, Jun. M.D.

(Concluded from page 432.)

SCIRRHOUS AND ENCEPHALOID TISSUE.—We have just seen that the stomach and rectum are the two portions of the digestive tube in which tubercles are most rarely developed. They are, on the contrary, these, where the scirrhus and cerebriform, or encephaloid tissue, most commonly appears.

These tissues may arise primitively, either in the mucous coat itself, or beneath it.

When they arise beneath the mucous coat, we observe them, at first, invading the laminated tissue: they may acquire a considerable size, and form even tumours projecting through the parietes of the abdomen, before being propagated either to the muscular coat, the muscular fibres of which may be easily dissected from beneath them, or to the mucous coat, which is found every where white and sound. But, most commonly, if the cancerous tumour be at all considerable, we no longer observe any trace of muscular fibre; the mucous coat ends in becoming disorganized and destroyed, and the internal surface of the stomach then presents an ulcer of a greater or less extent, the edges of which are formed by the mucous membrane, irregularly divided, (*decoupée*) and the base by the scirrhus and encephaloid tissues, in a state of crudity or softening. In proportion as they pass from this state, they become destroyed, and perforation of the parietes of the stomach takes place sooner or later. But sometimes, as we have already seen, the contents of this viscus are effused into the peritoneal cavity, whence fatal symptoms arise; sometimes, by a happy artifice of nature, cellular adhesions established between the circumference of the ulcer and a neighbouring organ, prevent effusion from taking place. We have frequently seen the liver and the pancreas form the plug. In the cases of this kind which we have observed, we have never found the pancreas diseased. As for the liver, we have sometimes found its tissue uninjured beneath the greyish or reddish *detritus* covering the base of the ulcer; occasionally we have seen it participating in the cancerous degeneration to the extent of some lines only, beyond which it was healthy. Finally, at other times the disease seemed to have been propagated from the liver to the stomach, which latter organ seemed only to have been secondarily affected, and the parietes of which had been destroyed from without to within.

In a small number of individuals, the cancer primitively invades the mucous coat, which becomes thick, soft, fungous, and at last ulcerated. In this manner cancer of the womb frequently commences

by ulceration of the mucous coat, lining the interior of the vagina, and the neck of the uterus. No tumour in such case precedes the ulceration. At other times, the cancer, primarily developed in the mucous coat, shows itself under the aspect of a polypiform tumour, projecting above the rest of the membrane, sometimes to the extent of some lines only; at other times, of from one to three inches, connected with it by a large base, or by a small peduncle. Many of these tumours exactly resemble certain champignons, the long stalks of which support a large capital with round edges. Their surface is commonly rugous and unequal, frequently bleeding; their tissue soft, fungous, and very vascular. The mucous membrane around them is most commonly healthy. Similar tumours are found in every part of the stomach; we have seen them implanted round the cardia, oppose the free introduction of nourishment into the stomach, and we have observed them around the edges of the pylorus, obliterating more or less completely that opening. When inconsiderable, and occupying the surface of the stomach, they may exist without in any manner disturbing the functions of that organ. We have found them, after death, in individuals whose ready digestion, and the complete absence of pain at the epigastrium, nausea, eructations, &c., did not admit of even a suspicion of the existence of organic disease of the stomach.

Erectile Tissue.—We have sometimes witnessed, loose (*flottant*), at the internal surface of different portions of the intestinal canal, small round or oblong tumours, of a brownish colour, attached to the mucous coat by a thin and narrow pedicle, and having, upon an average, the size of a hazel-nut. On cutting and pressing them between the fingers, some black liquid blood is made to issue; and on subsequently washing them, their tissue is observed to be formed of a crowd of filaments, intersecting each other in different directions, and leaving between them interstices of various forms and sizes, where the blood seems to have been effused. The pedicle of these tumours is formed by a prolongation of the mucous coat, which around them is healthy.

These tumours, which present all the characters of the *erectile tissues*, are but rarely met with: and when they do exist, only one or two can be discovered in the whole extent of the canal. Once we have seen the mucous coat of the cæcum present eight or ten crowded together.

In the cases which we have observed, the *erectile tumours* were too small for any symptom to announce their existence. When more considerable, might they not be the occasion of extensive hæmorrhages?

Mélanoses.—Under this name we designate small black tumours which we have several times observed in the great intestine. They are subjacent to the mucous coat, which they raise up; those we have dissected were, upon an average, of the size of a hazel-nut. They were round, of a beautiful deep black, crushed easily under the finger, and were like the matter with which common anatomical injections are made. We have found the transverse colon filled with similar tumours in an individual who for a long time had been subject to an

abundant diarrhoea, which alternately appeared and disappeared; the mucous coat was in no wise diseased.

The mucous tunic of the small intestine, and of the cæcum, is sometimes found covered by a truly infinite number of small black points, of scarcely the size of the head of a very small pin, and which may be somewhat justly compared to the hairs of a beard recently shaved. We find them, most commonly, crowded together, so as to form by their assemblage round or oval patches, on which the white mucous coat appears as if penetrated by an infinite number of these small spots; their colour may be made to disappear on slight friction: the mucous coat beneath them presents a small lacuna, with a white edge and base.

These black spots sometimes cover the mucous coat to the extent of several feet. It is in the lower quarter of the small intestine that they are most frequently observed. We have never found them in the stomach, and they are very uncommon in the great intestine below the cæcum. They exist in all possible conditions of the mucous coat. We met with them so often during the summer of 1821, in individuals who had died of different diseases, that we are much inclined to think that no morbid symptom is induced by them. Our friend and colleague, M. Descieux, has also observed them in a very great proportion of the sheep killed for the market, the intestinal canals of which he had occasion to examine, towards the end of the autumn of 1821. But what is a remarkable circumstance, we found them but rarely after the commencement of winter!

If we endeavour now to determine the nature of these black points, we may remark, first of all, that they have a disposition similar to that which the mucous follicles present, as so well described by Leger nearly two centuries ago. Like these follicles, they are observed grouped around each other, and forming, by their agglomeration, circular, oval, oblong, angular, &c. figures. Like them, they are found more numerous the nearer we proceed in our examination to the cæcum. Is it not allowable to imagine, from the preceding considerations, that these black points are nothing more than the result of a morbid secretion of the follicles?

Serous Cysts.—We have frequently found these cysts developed beneath the mucous coat, both in the small and large intestines. The major part of those which we have met with were of small size. The largest we have had occasion to dissect was of the size of a common walnut. Primitively developed in the laminated tissue, subjacent to the mucous coat, it had extended between the fibres of the muscular coat, and formed a remarkable projection beneath the peritoneal coat.

If we are to believe authors, this species of cysts have, under some circumstances, undergone a prodigious development. Bonet, Dehaen, and Peter Frank, have related cases in which these tumours had been mistaken for ascitic dropsies; the operation of paracentesis was performed: an enormous quantity of serosity issued from the abdomen, and it was not until after death that the true nature of the disease was discovered.

Several authors have likewise spoken of vesicles full of a serous

liquid, developed at the free surface of the mucous coat, to which they were adherent. Bonet observed one of these vesicles, seated on the pyloric circle, and projecting to the extent of half a finger's breadth into the cavity of the duodenum. The mucous coat of the stomach, in its whole extent, presented several others of them, some of which were whole, and others lacerated. Bonetus gives them the name of hydatids.

Œdema of the Intestines.—Not only do serous cysts develop themselves at the free or adherent surface of the mucous coat of the intestines, but also the laminated tissue subjacent to that membrane may become the seat of a real serous infiltration. We have several times observed this œdema of the sub-mucous cellular tissue, the existence of which had been denied by Bichat. We have met with it more especially in dropsical subjects, who had laboured under diarrhœa, in aged people, who, after having languished for a considerable period in the hospital, had finally fallen into an adynamic state: and in patients exhausted by chronic organic affections. We observed it particularly well marked in a female who had laboured under encysted dropsy of the ovary.

We have also witnessed a considerable quantity of serosity effused between the laminæ of the cellular tissue subjacent to the mucous coat, lining the internal surface of the gall-bladder.

Adipose Tissue.—We have only once met with a fatty tumour in the substance of the parietes of the digestive tube. It existed towards the middle part of the ileum, and was of the size of a hazel-nut. Developed beneath the mucous coat, which had preserved its natural appearance, it presented a uniformly smooth surface; but when the mucous coat covering it was removed, it presented a clustered appearance (*un aspect comme pelotonné*).

It was perceptibly formed of a numerous assemblage of small oval or spheroidal vesicles, separated by slight furrows, traversed by vessels; each of these vesicles contained fat. A narrow pedicle kept the whole tumour adhering to the laminated tissue.

ARTICLE III. *On the state of the digestive tube in the different fluxes, known under the name of diarrhœa, dysentery, and lientery.*—These affections have been for a long time looked upon as diseases entirely independent of inflammation of the intestines. Many ancient authors have, in truth, spoken of the ulcerations seated at the internal surface of the digestive tube in chronic diarrhœas, but they consider them as an effect of the diarrhœa. Such was the opinion of Boerhaave, and of Van Swieten, his commentator. We have already seen that such also was pretty nearly the idea of Stoll; and it may be likewise found in the writings of Hippocrates. He was not ignorant that in dysentery the intestines are the seat of more or less deep ulcerations, but he regarded them as being occasioned by degenerated bile and phlegm.

Is relaxation of the bowels constantly connected with an inflammatory condition of the mucous coat of the intestines? This is a very important question in a therapeutical point of view. We shall endeavour to answer it by presenting a summary of the numerous cases which we have collected on the subject.

We have several times found, in individuals who had laboured under recent or chronic diarrhœa, the internal surface of the intestinal canal very pale in its whole extent, the mucous coat having preserved its thickness and ordinary consistence. Patients weakened by long organic diseases, hydropics, old people under that state of debility denominated by the ancients cachexia, and who succumbed after having laboured, for a longer or shorter time, under considerable looseness, frequently present that state of the intestinal canal. Their stools are copious, very liquid, purely watery; surpassing by much the quantity of liquids taken in. We have sometimes found, in cases of this kind, a well-marked serous infiltration of the sub-mucous cellular tissue.

Morgagni has transmitted to us the history of several cases of diarrhœa without inflammation of the mucous coat of the intestine. He has seen several individuals labouring under that disease die in a short space of time, exhausted by the excessive abundance of their alvine evacuations. In these atonic diarrhœas, the intestinal parietes frequently become much extenuated; the fleshy coat, especially, experiences a true atrophy, and occasionally seems to be only composed of some pale and small fibres, widely separated from each other. Bonet had already remarked this fact. "In chronic diarrhœa," says he, "we find the intestines as thin as a cobweb." The intestine, in this state, seems to be unable to fulfil its functions; chyli-fication is but imperfectly performed, absorption becomes much less active, and the food is frequently voided as when taken. This is what the ancients designated under the name of *lientery*.

The mucous coat of the intestines may then, like many other textures, become the seat of a much more abundant secretion than usual, although it presents no trace of inflammation. It is thus that, during convalescences from chronic maladies, the exhalation of serosity into the subcutaneous cellular tissue is frequently augmented. It was not, therefore, without reason that Sauvages designated under the name of *flux*, a particular class of diseases.

Since truly atonic fluxes may exist, it follows that a strengthening and astringent treatment is, in these circumstances, the only proper plan to be pursued. Thus the œdemata, of which we shall presently speak, may be dispersed, either by the employment of topical stimulants, or by the internal administration of tonic medicines.

In other individuals, we find the mucous coat of the intestines equally white in its whole extent; but beneath it numerous tubercles, or other adventitious tissues, exist. They provoke diarrhœa, either by the sympathetic irritation which they determine to the mucous membrane covering them, or by stimulating by their presence the muscular coat, the contractions of which consequently become more rapid and more intense. It is in this manner that the different adventitious tissues, developed in the parenchyma of the lungs, provoke an habitual irritation of the mucous membrane of the bronchiæ; but, most commonly, the diarrhœa in this case does not appear to become permanent and considerable, until the period when the tubercles, having become softened, inflame and ulcerate the mucous coat.

It is, moreover, indubitable, that in a very large majority of cases,

the intestines of individuals labouring under diarrhœa, whether complicated or not with dysenteric symptoms, present evident marks of phlegmasia.

This phlegmasia may be seated in the small or in the large intestine.

In the small intestine, it frequently only exists to the extent of some fingers' breadth above the ileo-cæcal valve; at other times a larger portion of the small intestine has laboured under it, where it either appears under the form of a simple injection of the mucous coat, alteration of its texture, red or white softening of its tissue, or ulceration.

Numerous cases have apprised us that acute or chronic diarrhœa is the frequent result of isolated inflammation of the small intestine, without the large participating in it in any manner. We insist on this fact, because M. Broussais has laid down, as a general principle, that enteritis is accompanied with constipation, and that diarrhœa only supervenes when enteritis is complicated with inflammation of the colon (*colite*).

Of the three portions of the great intestine, the cæcum is that which, in diarrhœa, most frequently presents one of the three degrees of inflammation; after that the colon; and, lastly, the rectum.

The symptoms, the *ensemble* of which constitutes dysentery, are not connected with any particular state of the intestines. The tenesmus alone announces that inflammation exists in the rectum. As for the bloody and glairy stools, they appear in individuals whose intestines present lesions analogous to those which are observed in other patients whose stools had always been purely watery.

We once found a somewhat considerable number of ulcerations in the ascending colon, in a phthisical patient, who, after having previously laboured under diarrhœa, had not felt it for a long period, and had even become constantly constipated. It may be conceived that this may be the case, when the ulcerations are small, by no means numerous, and when neither the edge nor the base is inflamed. In fact, at such times they can only, like tubercles, produce a flux by the sympathetic irritation of the mucous coat surrounding them, or of the muscular coat.

The different states which the digestive tube may present in diarrhœa being well known, can they be distinguished during life from the symptoms which manifest themselves? This, in many cases, is possible. Thus, if pains of the abdomen are observed, if the skin is burning hot, the pulse frequent, if the dejections are slimy, membraniform, or bloody, we may be satisfied that the intestine is the seat of more or less intense inflammation.

We may add, however, that nothing is more common than the absence of every species of pain in cases where numerous ulcerations cover the internal surface of the intestines, whether of the ileum, cæcum, or colon. How frequent, also, is it on the other hand, to see patients complain of violent pains in the abdomen, although the digestive mucous coat is not the least inflamed. Is not this the case, as the success of the treatment confirms, in lead-colic, which is cured by the employment of the most active drastics, in the colics termed

nervous, which frequently yield to eminently stimulant medicines, and in those which are owing to accumulation of flatus and of fecal matters, and which are treated with so much advantage by repeated purgatives? Stoll has cited a remarkable case of syphilitic intermittent colic, which yielded to the use of corrosive sublimate.

We have already seen that intestinal tubercles may arise, become developed and softened, without any pain indicating their presence.

The character of the stools is not always itself a certain sign by which we can recognise inflammation. Sanguineous evacuations have been observed to take place *per anum* in individuals whose intestinal mucous coat was found sound after death. These passive hæmorrhages are analogous to those which take place in many dropsical individuals, at the internal surface of the serous membranes of the chest and abdomen; they are similar to the hæmorrhages of which the skin, the cellular tissue, and the synovial membranes, become the seat in scorbutics.

The serous dejections, resembling water, coloured yellow or green, manifest themselves equally in all possible conditions of the digestive tube, in the cases where it is ulcerated, and in those in which its parietes are pale, thin, and œdematous (*infiltrées*).

When even ulcerations exist in the intestines, ought they to be regarded as a constant obstacle to the employment of tonic and astringent substances? They present such a great variety in their nature, that it seems the same method of treatment cannot agree with all.

The white, gray, or brown colour of the base, the nature of the secretion which takes place there, the want of, or the considerable thickening of the laminated tissue which forms it, the appearance and disposition of their edges, the different degrees of consistence, of thickness, and of colour, of the mucous coat which constitutes them, the separation of this membrane to a greater or less extent, its state in the spaces between the ulcerations—are they not so many circumstances which seem to demand a multiplicity of modifications in the treatment? We may thus easily explain how any curative method succeeds very well in one case, and completely fails in another. We have seen, for example, several diarrhœas yield to the decoction of catechu; we have seen others increase, and become aggravated during the administration of this medicine, although in both cases the symptoms were nearly the same, and the patients placed in nearly similar general circumstances; the major part were consumptive individuals. It would frequently be of great importance, could we, in the same portion of intestine, apply an astringent or tonic substance upon the ulcerations, and cover with emollient applications the spaces which separate them, and reciprocally. In this manner the Surgeon acts in the treatment of several ulcers situated on the surface of the body. He heals them by endeavouring to keep up inflammation to a certain degree, above and below which the disease cannot proceed towards resolution. Is it not again by the employment of topical astringents that many chronic ophthalmiæ are cured? Is it not also by the employment of resinous substances that chronic phlegmasiæ of the

mucous membrane of the lungs and urethra may be very successfully treated? We have very frequently seen M. Lerminier have recourse, with marked advantage, to a slightly stimulant treatment towards the end of acute pneumonia, having a tendency to pass into the chronic state.

Finally; in order to add fresh weight to these considerations, we might invoke the authority of the ancients, who, in diarrhoeas and chronic dysenteries, made a frequent and successful use of many astringent substances, given under different forms.

We shall not suffer ourselves, however, to accumulate observations for the purpose of elucidating these important questions, but conclude with the following quotation from Muschenbroek:—

*"Pauca experimenta nos confidentes reddunt, audaces, gloriosos; multa incertos; plurima denique, ac humanam ferè superantia patientiam ad aliquid concludendum nos eminè preparant."**

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

I. *Account of some further Experiments to determine the Absorbing Power of the Veins and Lymphatics.* By I. O'B. LAWRENCE, M.D. and B. H. COATES, M.D.

THESE gentlemen were assisted in their experiments by Dr. Seybert, Dr. Horner, Professor Keating, Dr. S. Jackson, J. Lukens, C. Biddle, H. Seybert, and W. Dick, jun. They made thirty-four experiments, in

* The following is an extract from the "*Report made to the Section of Medicine of the Royal Academy of Medicine*," by MM. CHAUSSIER and Hippolyte Cloquet, on the preceding *Mémoire*:—"En somme, Messieurs, nous avons trouvé dans le *Mémoire* qui nous a été soumis, les preuves d'un grand éloignement pour tout esprit de système; il est propre à donner de son auteur une très favorable idée, par le soin aussi scrupuleux que méritoire, avec lequel celui-ci a fait ses observations; la forme d'ailleurs répond ici au fond, et nous concluons à ce que le travail dont nous venons de vous rendre compte soit honorablement déposé dans vos archives, jusqu'à ce que l'Académie s'occupe de compléter le nombre de ses membres, le nom de M. Andral, fils, devra être porté sur la liste des candidats.

" Paris, le 30 Juillet, 1832.

" Signé

CHAUSSIER.

HIPP. CLOQUET, Rapporteur.

" Certifié conforme par le Secrétaire de l'Académie,

" BECLARD."

which the prussiate of potash was introduced into the alimentary canal (the means of detecting this salt in the fluids are evident): from these we gather the following results:—

The general weight of evidence in these cases is strongly in favour of the principal absorption having taken place through the vena portarum. Only one case is mentioned in which the colour in the fluid from the thoracic duct was not less intense than in the serum of the vena portarum.

In this instance, the former was not taken until thirty minutes, and the latter in twenty-one; during the interval of which there is every possibility for much of the absorbed substance to reach the points at which both were examined; as much greater diversity than this exists in many of the results. Hence it may be supposed that absorption would have taken place in the porta, to a greater extent, had both been examined at the same time. Another circumstance which affects the inference to be drawn in a very material degree, is, that the vena portæ conveys so much larger an amount of fluid than the thoracic duct, that an equal intensity of colour implies the presence of a much larger quantity of the chemical agent. This is also a reply to a suggestion made in the report to the Academy of Medicine in favour of the thoracic duct as a route. But as this was based, as far as relates to the mucous membranes of which we are treating, upon only seven experiments, and in none had we then proceeded to examine the serum of the vena portarum, it is hardly necessary to array them in opposition.

Inferences, however, of a more decisive kind may be drawn from some of the experiments which ensue. Five are first enumerated, in which the vena portarum was secured by a ligature. In the two first, the cardia being undisturbed, and the fluid introduced down the œsophagus, the œsophageal and pharyngeal veins had access to it, and their radicles or capillaries may have absorbed the salt. A degree of uncertainty also prevails whether the vena portarum was in all these instances properly secured. In the three last, however, this point was carefully ascertained by subsequent dissection, and a ligature was also passed round the cardia to prevent the regurgitation of the fluid into the œsophagus itself. The prussiate was then introduced through a wound in the upper end of the duodenum, and this part also tied. In the first case, the prussiate was detected in the heart in thirty-four minutes, in the second in thirty-nine, and in the third in thirty-five minutes. This we consider as proving directly and decidedly that there are other means of absorption besides the veins. We now proceeded to tie the thoracic duct, and endeavour to ascertain whether the prussiate could be made to enter the circulation, by passages independent of this. The three first experiments recorded are not quite definite from the cardia not being secured, as the fluid was liable to regurgitate into the lower part of the œsophagus; a circumstance which we always found to take place when that part was not artificially closed. It may also be remarked by the way, that the œsophagus was always found, when examined for that purpose after feeding, to contain a portion of the substances swallowed, whenever these retained the fluid or semifluid form.

As, however, the agent was conveyed into the systems of these animals, it certainly follows, from the two first cases, that another route than the thoracic duct admitted of the passage of the salt. In the last of the three experiments both this vessel and the trunk of the lymphatics in the right side of the neck were secured; thus stopping every known outlet to the system of lacteals and lymphatics. The blue was, nevertheless, easily produced in the serum of blood taken from the right side of the heart, in twenty minutes.

In the next animal, after securing these parts, the cardia was also tied, thus confining the visible means of absorption to branches of the vena.

portarum alone. Injection of the prussiate was made through an opening below the pylorus, and the wounded part tied. In thirty-two minutes, blood was taken from the right side of the heart, the serum of which gave a strong blue. We regard it, then, as evinced, first, by the two first of these experiments, that other means of absorption than the thoracic duct exist; secondly, by the third, that other routes exist than either that or the lymphatic trunk of the right side; thus confining them, of all visible vessels, to the sanguineous ones alone; and, thirdly, by the last, that absorbed fluids are carried through the trunk of the vena portarum individually, as access was barred to the branches of any other vein.

In the four next instances, after tying both the two lymphatic trunks and the vena portæ, injections of prussiate of potass were made down the œsophagus, without tying either the cardia or pylorus. In all these cases, the prussiate was conveyed into the circulation. In the first, it was discovered to be in the right side of the heart in thirty-six minutes, in the second, in forty-eight minutes, in the third it was found in the aorta in thirty minutes, and in the last it was exhibited more faintly in the shorter period of twenty-five minutes, in the right side of the heart.

A comparative experiment was made by tying all the attachments of the stomach whatever, in order to ascertain the effect of simple infiltration. No prussiate was found in any of the fluids, although the stomach almost immediately after tying, gave an evident blue on applying the test to its outer surface, the animal being alive. The contents of the carotid were removed for examination in thirty-one minutes; of the right side of the heart, in thirty-four; of the bladder in thirty-seven; and then the pelvis and papilla of the kidney were examined.

We conceive we have thus established that articles taken into the stomach may escape by three outlets for absorption, namely, the vena portæ, the œsophageal veins, and the thoracic duct; and if all these are closed, the absorbed matters are no longer conveyed to the circulation or to the urine. With regard to the quantity conveyed by each, we have no sufficient means of judging. As the quantity of fluid, however, contained in the vena portarum, is so much greater than in the thoracic duct, it follows, that to produce a colour of equal intensity, a much larger amount of the colouring matter is requisite.

In consequence of reading the experiments described in the medical journals which have reached us, as having been made by Professor Mayer of Gottingen, upon absorption in the lungs, we have made a few with that reference.

The animals generally died in about a minute from the injection, from suffocation, by the ligatures which we placed on the tracheas of most of them. These experiments, we think, go to favour the idea that absorption from the mucous inmembrane of the lungs is performed principally by the pulmonary veins; but we do not feel prepared to give a positive opinion from such limited inquiries. We would, however, lay particular stress upon experiments 5th and 6th; (Nos. 65 and 66 of the list). In the first, the blood from the left side of the heart indicated the agent in much larger proportion than that from the right side, both being examined about the same time; viz. seven minutes. In the second, where the examination was made in a much shorter period, viz. three minutes and a half, and four minutes and a half, the article was distinctly found in the left side of the heart before it had arrived in any other part of the system.

The effect of infiltration is also remarkable. The last is also probably a case of it.

The results of five trials of the prussiate in the cavity of the abdomen are here arranged for inspection.

Animals.	Quantity.	Thoracic Duct.	Carotid and Jugular.	Urine.
Kitten.	$\frac{1}{2}$ oz of solution.	12 & 13 m. distinct blue.	6 m. distinct blue.	19 m. no blue.
Idem.	Idem.	4 m. blue.	2 m. no blue.	10 or 15 m. no blue. 29 m. distinct blue.
Idem.	Idem, nearly.	3 $\frac{1}{2}$ m. blue.	2 m. no blue.	5 m. blue, not strongly.
Idem.	$\frac{1}{2}$ oz.	3 m. blue.	4 m. strongly blue.	More than 4 m. doubtful.
Cat.	Uncertain.	9 $\frac{1}{2}$ m. blue.	6 m. no blue.	More than 9 $\frac{1}{2}$ m. no blue.

The short time in which the prussiate reached the upper part of the thoracic duct in the above cases, induced us to make four other trials in order to ascertain the earliest period at which that took place. Half an ounce of solution was employed in each case.

In the first animal, a kitten, the salt first arrived at the spot of observation in four minutes, and the quantity gradually increased till seven or eight minutes. In the second kitten, it appeared in two minutes. The serum of this animal gave a blue. In the third kitten, in three minutes and a half. Serum of blood also blue. In the cat, it first appeared in thirteen minutes.

In these cases, the thoracic duct was cut off near its insertion; and the test applied there. In consequence of this interruption, previously to the prussiate arriving at the upper extremity of the duct, the discovery of the salt in the serum of the blood clearly evinces that it was conveyed there by other channels.

It is mentioned by Magendie, that he has seen, on pressing the lacteal branches so as to discharge their contents in the direction of the trunks, that those branches would again fill themselves after the animal's death. We have witnessed these appearances ourselves; but we do not know of any similar observations made on the lymphatics, or of any evidence of the actual chemical presence of an article conveyed after death into either of these systems from without.

Four kittens were bled to what is commonly considered death. The blood ceased to flow from the divided carotid, and voluntary motion was extinct. Prussiate of potass in solution was then thrown into the abdomen. It appeared at the thoracic duct in five and a half, five, fourteen, and twelve minutes respectively. In the two last, the great vessels originating at the heart were secured by a common ligature. The blue colour was in every instance perfectly distinct.

In reasoning upon the subject of absorption, the question has frequently arisen, whether the articles found in the living fluids exist there as chemical substances, or have their chemical nature altered and animalized by the action of the vessels through which they have entered the system. It was, however, deemed a curious subject of inquiry, whether artificial chemical changes can take place in the fluids while they continue to circulate in living vessels, and the ordinary actions of life go on. We commenced by throwing prussiate of potass into the abdomen, and green sulphate of iron into the cellular tissue, in order to try whether the well known result of their admixture, the prussian blue, would be produced in the vessels. This,

however, did not take place; and we resolved to repeat it, by throwing the sulphate, as the article of more difficult absorption, into the abdomen, where this process went on with more facility, and the prussiate into the cellular substance. On performing this, we were gratified by the striking result of a distinct and beautiful blue in the thoracic trunk, and its contents, and in nearly the whole substance and surface of the *lungs*. These viscera were preserved in spirits, and are now in our possession. The blood threw up a coagulum of a strong blue colour, and the lymph and chyle from the thoracic duct threw down a blue deposit. Thus not only a foreign, but a pulverulent substance, could present its unnatural stimulus and circulate through the vessels, and could accumulate in the lungs, without preventing the actions of life from considerable exertion, and without occasioning coagulation of the blood. The animal manifested some difficulty of respiration before she was killed, but walked about without the least difficulty, and uttered no cries, nor other signs of disturbance of its powers. In another case, the urine and lungs are noted in our journal as exhibiting a blue. The other parts similar to those above enumerated, are not described as being found coloured. In a third, the fluid in the thoracic duct was blue, but not the other fluids examined, nor the lungs. Two unsuccessful trials were also made. In another case the thoracic duct was tied, and the same process repeated. A decided bluish green was here found in the urine; but neither the serum of the arterial blood, nor the lymph of the ductus thoracicus, manifested the blue or green.

II. Case of Rupture of the *Æsophagus*, with Perforations of the Stomach, supervening to an acute Disease of this Organ. By M. BOUILLAUD, *élève interne*, at the Hospital Cochin.

Pierre-Louis Parechant, aged twenty years, of a large form, but of a pale and nervous aspect, was received into the Hospital Cochin on the 8th of March, 1822. He had suffered, during the six previous weeks, from pain in the stomach, increased after a meal and during the night; had muscular feebleness, with tremblings; and, when a child, had been affected by a purulent discharge from the right ear. On his admission, he had been bedridden only four days, and, at that time, presented the following symptoms: the tongue rather red, and very moist; loss of appetite; thirst; constipation; the region of the stomach hot and painful; pulse frequent and sharp; occasional rigors; sub-orbital headach; slight delirium through the night. *Sweetened gum-water, thirty leeches on the epigastrium, lavements, antiphlogistic diet.*

The patient appeared relieved by this treatment; but, for the first time, vomited once spontaneously. — On the 9th of March, his pulse was full, frequent, and large. *Bled once from the arm.* — On the 10th, 11th, and 12th, the retchings continued. The pulse was still full, strong, and frequent. — 13th. He trembled greatly in the morning, and on endeavouring to get up staggered, and was unable to sustain himself. He lost his speech, stammered a few unintelligible words; could not seize objects with his right hand; his face was pale; mouth drawn to the left side; pupils dilated, but mobile. *Bled from the arm, a purgative lavement.* — 14th. Epistaxis: he could comprehend questions, but not answer them; was impatient, agitated, and tossed himself under the bed-clothes. *Bled from the foot, blisters behind the ears.* — 15th. The agitations alternated with faintings; sighed and moaned frequently; the pulsation of the heart was very strong; heat of skin. — 17th. Squeezed my hand forcibly with that which was paralyzed; sighed profoundly. — 18th. Total loss of recollection; countenance contracted; the pupil large; pulse 150: death at nine o'clock.

Dissection twenty-four hours after death. The limbs rigid. 1st, Head.

Injection of the meninges; the lateral ventricles were distended with a great quantity of turbid serum, approaching a milky hue; the cerebral tissue rather soft. 2d, *Thorax*. Gas escaped on opening the left cavity of the chest, the corresponding lung being slightly pressed upwards; the cavity of the pleura contained about four ounces of a reddish-brown fluid; the pleura was injected, and covered with red spots. The *oesophagus*, a little above the *cardia*, and to the left side, presented a perforation of the size of the finger's-nail; and a little higher a rupture an inch and a half in length, through which the liquid just described had escaped into the left cavity of the chest, and which was nothing else than part of that contained in the stomach, mixed with blood. The right side of the thorax presented nothing particular. 3d, *Abdomen*. On opening the abdominal parietes, some gas and a quantity of liquid matter contained in the peritoneal cavity escaped. The stomach presented, in its splenic region, four perforations, disposed in such a manner as to form the four angles of a parallelogram; the largest of which was of the size of a centime, and the others were smaller and smaller. The mucous membrane was destroyed by ulceration to a much greater extent than the serous, which probably was torn by the retchings. The mucous membrane of the stomach was red and injected throughout. The portion of the peritoneum, in contact with the liquid effused through the perforations, was injected. The mucous membrane of the small intestines, of the cæcum, and colon, was also injected, but entire. — *Archives, Mai, 1823*.

III. *Case of Rupture of the Stomach, supervening to a Cancerous Affection of this Organ, during the Efforts at Stool.* By M. BOUILLAUD, &c.

Antoine Botte, aged sixty-one years, was received into the Hospital Cochin, on the 22d of February, 1822, with symptoms of a cancerous affection of the stomach, combined with pulmonary disease. The stethoscope gave the report of ulceration when applied at the top of both sides of the thorax. However, there was no symptom that announced immediate dissolution; when, seven days after the entrance of the patient into the hospital, I was called to him at one o'clock in the morning. He had got up in order to go to the night-stool, and after some fruitless attempts, he at once lost all recollection. I found him in the following state: countenance pale and inanimate; the eyes dull and obscure; pulse could not be felt; skin cold, and, with the countenance, covered with a cold sweat; respiration slow; no answer to questions; death shortly after.

Dissection. — Both the lungs were tuberculated, and excavated at their summits by large fistulous ulcers filled with tuberculated matter, and each was lined with two membranes, of which the deepest seated was red and adherent to the pulmonary tissue. On opening the abdomen, a great quantity of dirty, liquid, and muddy matter, escaped. The peritoneum presented a very red and punctuated appearance where it was in contact with the effused matters, which resembled that contained in the stomach. This organ presented, at its pyloric region, near the small curvature, a perforation about the size of a half-franc piece, of which the margins were regular and thickened, and divided at the expense of the mucous coat. This perforation embraced, at one extremity, a large ulceration of a parabolic form, circumscribed by a border projecting in the manner of a pad or roll. The bottom of this ulceration was formed by the pancreas, whose anterior surface adhered to the whole circumference of the projecting border just mentioned. The perforation was precisely in that situation where the pancreas terminated, and ceased to furnish the substituted paries to the disorganized portion of the stomach. The pyloric ring extended into the border which circumscribed the ulceration, and was white, pearly, and compact. On the rest of its internal surface the stomach presented several

red patches, as if spotted with blood, which could not be removed by repeated washing. The pylorus was considerably contracted. Nothing particular was observed in the intestines or in the brain. — *Archives, Mai, 1823.*

IV. *Hæmorrhage from one of the Fallopian Tubes, speedily becoming fatal.*
By M. GODELLE, M.D. Soissons.

A female, while suckling, became the subject of a violent paroxysm of anger, a few hours after which she was seized with severe colicky pains, accompanied with retchings and very frequent stools. The abdomen soon afterwards became hard and tumid; the pains more violent; and cold perspirations, hiccup, syncope, and death, supervened within nine hours from the first attack of pain. The body had been interred; but owing to a report that the individual had been poisoned by her husband, exhumation was ordered, and the body inspected.

Dissection. — The head and thorax presented nothing remarkable. The abdomen, which was tumid, contained within its cavity more than eight pounds of blood, separated into clots of coagulum and a reddish serum, and situated chiefly in the hypogastrium, between the bladder and womb on the one side, and the small intestines on the other. The mucous membrane of the digestive tube was particularly examined from the mouth to the anus; it presented no marks of disease, excepting a slight redness at one point, in the small intestines, where two prune-stones were lodged. An oblong perforation, with irregular and torn-like margins, about an inch in circumference, was discovered in the texture of the right Fallopian tube: this opening was surrounded by a reddish areola, the rays of which extended about three lines from the margin of the perforation. The rest of the peritoneum was examined with the most scrupulous attention, and it did not appear that it could have permitted, at any other point, the escape of the smallest quantity of blood, not even by means of transudation, as it retained, throughout its extent, its natural character. The uterus possessed a blanched appearance, and was altogether exsanguineous: it contained about half an ounce of mucus, but not a drop of blood. — *Ibid. Mars, 1823.*

V. *Case of Tumour of the Brain.* By M. DUPAREQUE.

A female, of a strong constitution, of an ardent temperament, and of strong passions, at the age of thirty-eight, and after a life of frequent change from the utmost distress to the greatest and most warmly felt pleasure, became suddenly sedentary, owing to the death of her husband. She was afterwards seized, in a manner more or less continued, with violent pain in the posterior and superior part of the head; occasionally accompanied with a state of coma, from which she was frequently roused by violent spasmodic contractions of all the muscles of voluntary motion, attended with insupportable pain. At the age of forty, these symptoms had become much increased; she had lost her memory; and from a state of high delirium, had sunk to idiotcy. After a sudden and unexpected melioration of her symptoms, which, however, was of short duration, she became apoplectic, in which state she died on the second day.

Dissection. — Two ounces and a half of limpid serum were found in the left ventricle of the brain; an equal quantity, more turbid, and possessing a reddish colour, was in the right ventricle, the posterior part of which contained a body having the form and size of a pullet's egg, presenting a bluish-red colour, and apparently intimately connected with the plexus choroides, to which it adhered, as well as to other points of the cavity, by means of fine vascular filaments. The internal structure of the tumour had the closest analogy in appearance to a piece of hepatized lung. — *Nouv. Bibl. Méd. Jan. 1823.*

VI. *Analysis of the Waters of Carlsbad.* By M. BERZELIUS.

M. Berzelius has lately analyzed the waters of this celebrated spring, and found them to contain the sulphate, carbonate, and hydrochlorate of soda; the carbonate, fluat, and phosphate of lime; the carbonate of strontian; carbonate of magnesia; phosphate of alumina; carbonate of iron; carbonate of manganese, and of silica. The carbonate of strontian, fluat of lime, and phosphates of lime and alumina, which are only found in small quantities, have never before been discovered in mineral waters. M. Berzelius, however, thinks that they may exist in other mineral waters, especially in those of Mont-d'Or, of St. Nectaire, and of Vichy, whose composition is analogous to that of Carlsbad.—*Arch. Gen. Med.*, 1823.

VII. *Case of Diabetes, treated with Carbonate of Ammonia.*

By Dr. NEUMANN, of Berlin.

A female, aged forty-eight years, of a feeble and hysterical constitution, suffered an attack of abdominal dropsy. This disease was soon after followed by an abundant secretion of urine, and a voracious appetite, with extreme emaciation. The diabetic state of the urine was demonstrated both by its quantity, and by its saccharine properties. Carbonate of ammonia was prescribed, and continued for four months; its dose was increased from five grains thrice daily, to fifty grains in the day. The patient left the hospital perfectly cured.

VIII. *Analysis of a New Sulphur Spring at Harrogate.*

By WILLIAM WEST, Esq.

It appears that one gallon of this water contains, of gaseous substances—			
Sulphuretted hydrogen	-	-	6. 4 cubic inches.
Carbonic acid	-	-	5. 25
Azote	-	-	6. 5
Carburetted hydrogen	-	-	4. 65
			<hr/>
			32. 8

And of solid contents—

Muriate of soda	-	-	735. 0
Muriate of lime	-	-	71. 5
Muriate of magnesia	-	-	43. 0
Bicarbonate of soda	-	-	14. 75

To sum up the comparison between the waters from the Old and New Wells, it appears that both contain the same ingredients, solid and gaseous; that the New Well has rather the greatest impregnation of the gases; that the Old Well contains rather more common salt; while the water of the New Pump holds a considerably greater proportion of the active constituents, the muriate of lime, and of magnesia.—*Journ. of Science*, No. 29.

IX. *Medico-Botanical Society.*

At the Meetings of this Society, on the 25th of April, and 9th of May, Sir Alexander Crichton, M.D. F.R.S. in the Chair, Mr. Frost, the Director, read a paper on the essential oil of bitter almonds. Experiments were made before the Society with this oil. A paper was read on *Atropa Belladonna*, and another on several medicinal plants used by Swiss Practitioners; the latter by Mr. P. J. Brown. Mr. Frost afterwards delivered a Lecture on *Stalsgrinitis Cambogeoides*, and on *Acorus Calamus*.

X. Conviction under the Apothecaries' Act.

This was an action instituted at the Lancaster Assizes by the Apothecaries' Company, against a person of the name of Stott, to recover the penalty of twenty pounds, imposed by an Act of Parliament passed in the 55th year of the reign of his late Majesty, commonly called the Apothecaries' Act, on persons who, not having been actually in practice as Apothecaries on the 1st of August, 1815, should commence as such after that period, without having previously undergone the examination, and received a certificate of their qualification from the Court of Examiners of the Society of Apothecaries, in the manner directed by that Act. It was proved in evidence that the defendant was about thirty-three years of age, that he had been employed from childhood in various woollen manufactories, and that from the end of the year 1813, to the end of the year 1817, he had been engaged by Messrs. Chadwick and Sons, of Rochdale, as a slabber. It was farther shown, that he had, subsequently to that period, attended patients, and furnished them with medicines, and had generally practised as an apothecary.

On the part of the defendant it was urged that the plaintiffs had not shown, or attempted to show, any instance of unskilful practice, and evidence was adduced to prove that the defendant, during the time he was employed as a slabber, used to read and study medical books, and that he also, during that time, was in the constant habit of attending patients, and prescribing for, and supplying medicines to, them, for profit; that he kept a shop, and, in short, practised as an apothecary.

Mr. Justice Bailey summed up the evidence to the jury, and told them that the question for their consideration was, whether the defendant was, on the 1st of August, 1815, *boná fide* practising as an Apothecary, and gaining a substantial part of his livelihood thereby. It had been proved that the defendant was, from the year 1813, to the year 1817, in the constant employ of Messrs. Chadwick and Sons, as a slabber, for twelve or fourteen hours a-day; and during a course of six years, the defendant had only been able to show attendance on five persons; and as it had been proved, that since the 1st of August, 1815, the defendant had acted as an Apothecary, and had not shown that he had obtained a certificate of his qualification from the Court of Examiners of the Society of Apothecaries, as directed by the Act of Parliament, he left it to them to say whether the defendant was entitled to the exemption contained in the Act, in favour of persons who, on the 1st of August, 1815, were actually in practice as Apothecaries; if they thought that he was, on the 1st of August, 1815, *boná fide* in practice as an Apothecary, they would find a verdict for the defendant: but if they thought that the cases of practice which were proved on the part of the defendant were not sufficient to warrant them in concluding that he was in *boná fide* practice as an Apothecary on the 1st of August, 1815, they would find a verdict for the plaintiffs for one penalty.

The jury almost immediately returned a verdict for the plaintiffs for one penalty of 20l.

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

I. A Letter to the Right Honourable the Lord Chancellor, on the Nature and Interpretation of Unsoundness of Mind, and Imbecility of Intellect. By John Haslam, M.D. late of Pembroke Hall, Cambridge. 8vo. Pp. 32. London, 1823.

The topics which this letter discusses are important to the medical and legal professions: it is likewise important that both professions should

entertain precise ideas respecting these subjects, and that the opinions of the one should be in strict accordance with those of the other. This, however, appears far from being the case: nor can it be wondered at when we consider the nature of the subjects, and the state of medical sentiment respecting them. The opinion of the Lord Chancellor, as delivered on several recent occasions, seems to be different from that entertained by the majority of our profession, as to what constitutes unsoundness of mind; and much of this difference seems to arise from a vague use of terms. It is respecting this discrepancy that Dr. Haslam addresses his Lordship. We recommend the Letter to the attention of our readers, from a conviction that the subject has not received that attention, generally, which it deserves, and which it certainly requires.

II. The Utility and Importance of Fumigating Baths illustrated; or a Series of Facts and Remarks, showing the Origin, Progress, and final Establishment of the Practice of Fumigations for the Cure of various Diseases, &c. &c. By Jonathan Green, Member of the Royal College of Surgeons, London, and S.R.N. 8vo. Pp. 115. London, 1823.

The advantages which may be derived from fumigation in various chronic disorders have now become too apparent to be doubted. The author of this brochure has undertaken an establishment for this mode of practice, which he professes to conduct in such a manner as will not compromise his professional character, and which will secure the favourable consideration of the Profession.

FOREIGN.

I. *Pyrétologie Physiologique, ou Traité des Fièvres considérées dans l'Esprit de la Nouvelle Doctrine Médicale.* Par F. G. Boisseau, Docteur en Médecine de la Faculté de Paris. 8vo. Pp. 608. Paris, 1823.

Dr. Boisseau is not strictly a disciple of Broussais. He adopts what is good in the doctrines of that pathologist, and rejects or controverts what seems objectionable. The work is, upon the whole, one of the best that has come before us. We will take an early opportunity of presenting our readers with an analysis of its contents.

II. *Monographie sur la Rage.* Par A. F. C. de Saint-Martin, Docteur en Médecine de la Faculté de Paris, &c. &c. 8vo. Pp. 393. Paris, 1823.

This production obtained the gold medal awarded by the *Cercle Medical* of Paris in 1817; and is an extended treatise on a difficult and unprofitable subject. We can recommend the work to those who wish to ascertain the present state of opinion respecting the nature and treatment of hydrophobia.

WORKS RECEIVED FOR REVIEW.

I. *A Series of Elementary Lectures on the Veterinary Art: wherein the Anatomy, Physiology, and Pathology of the Horse, are essayed on the general principles of Medical Science.* By Veterinary Surgeon Percival, of the Royal Regiment of Artillery. 8vo. Pp. 36—377. Longman. 1823.

II. *A short Treatise on Operative Surgery, describing the principal*

Literary Intelligence, &c.

Operations as they are practised in England and France; designed for the Use of Students in Operating on the Dead Body. By Charles Averill, Cheltenham, Fellow of the Royal College of Surgeons, London. 12mo. Pp. 183. Jackson. London, 1823.

LITERARY INTELLIGENCE.

In the press, the third Edition of Sir Astley Cooper's Work on Dislocations and on Fractures of the Joints.

The following Works are just published:—
Pharmacopœia Imperialis, sive Pharmacopœia Londinensis, Editionis burgensis, et Dublinensis, collatæ; cum Notis Anglicis Decompositiones Chemicas Exponentibus. Editio Secunda. 12mo. 7s.

The Quarterly Journal of Foreign and British Medicine and Surgery, of the Sciences connected with them; with original Cases and Communications. No. 18. 8vo. 4s. 6d.

Popular Directions for the Prevention and Cure of Headachs, Colds, and Indigestion; with Medical Prescriptions and Cases, interspersed with the most useful Remarks on these Subjects in the Works of Mr. Abernethy, Sir Astley Cooper, Dr. Hamilton, and Dr. W. Philip. The Second Edition, improved. By a Medical Practitioner. 18mo. 2s. 6d.

A Manual of Toxicology; in which the Symptoms, Treatment, and Modes of detecting the various Poisons, Mineral, Vegetable, and Animal, are concisely stated; to which are added, Directions for the Recovery of Persons in a state of Suspended Animation. The Second Edition, with Additions. By William Stowe, M.R.C.S. 18mo. 1s. 6d.

A Practical Treatise on the most frequent Diseases of the Month and Teeth, especially the Accidents of the first Dentition; with the Means of remedying them, of preserving all the parts of the Mouth in good condition, and an Essay on the Physical Education of Children; to which are added, Considerations on the Improvement of the Instruments of a Dentist, on a New Instrument proposed by the Author, and some proposed Plans relative to Artificial Teeth, with an Engraving. By T. G. Gerhaus, Surgeon-Dentist from Paris, &c. &c. 12mo. 5s.

Quarterly Report of Prices of SUBSTANCES employed in PHARMACY.

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THE METEOROLOGICAL JOURNAL,
From the 19th of APRIL, to the 20th of MAY, 1823,
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April.	Moon.	Rain Gauge.	Therm.			Barom.		De Lac's Hygrom.		Winds.		Atmo. Variation				
			9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	10 P. M.		
20			42	53	40	29	72	29	84	65	69	NNW v.	N W	Fine		
21			45	51	38	29	73	29	55	63	65	WNW	ESE	Fine		Fair
22			41	49	41	29	50	29	43	64	70	E	E var.	Fine		
23		.30	43	53	41	29	10	29	14	72	79	SSE	ESE	Fair	Sho.	Rain
24		.12	43	50	40	29	32	29	48	85	68	NE	N var.	Clo.	Sho.	Clo.
25	☉		42	51	39	29	55	29	63	69	75	SW	WSW	Fine		Sho.
26		.49	41	48	37	29	49	29	55	90	100	E var.	E var.	Rain		
27			41	50	38	29	83	29	98	77	72	E var.	E var.	Fine		
28			44	52	40	29	97	29	92	73	71	E var.	WSW	Fair	Fine	Fair
29			45	50	43	30	04	30	18	74	66	NNE	ESE	Fine		
30		.04	45	55	42	30	23	30	21	72	69	ESE	W	Fog	Fine	
1			45	57	48	30	11	30	13	67	72	NE	E	Fog	Fine	
2			52	62	49	30	16	30	10	67	70	E	ESE	Fine		
3	☾		55	65	48	30	11	30	12	68	71	E	E	Fine		
4			52	54	49	30	20	30	13	63	65	E var.	ENE	Fine		
5			57	64	53	30	00	30	85	57	63	ESE	ESE	Fine		
6			58	70	53	29	80	29	74	68	70	SE	SE	Fine		
7			58	75	50	29	65	29	70	60	75	SSW	SSW	Fine		
8			55	65	47	29	61	29	50	72	81	SSW	SSW	Fine		Fair
9		.09	51	60	44	29	50	29	65	70	72	SW	SSW	Fair	Fine	Fair
10	☾	.28	49	60	43	29	51	29	46	75	83	SW	SW	Fine	Fair	Rain
11		.13	48	59	39	29	50	29	42	81	87	SW	SW	Fine	Sho.	
12			42	62	42	29	52	29	40	73	75	W	SSW	Fine		
13			47	60	45	29	49	29	74	74	79	WNW	W var.	Fine		
14		.11	49	65	47	30	00	29	71	71	75	W var.	W var.	Fine		Sho.
15		.15	49	60	50	30	05	29	98	68	70	W var.	WSW	Fine		Sho.
16		.05	54	62	53	29	90	29	78	73	77	SW	SSW	Sho.	Fine	
17	☾	.17	58	65	46	29	80	29	92	79	69	W var.	WNW	Clo.	Sho.	Fine
18			51	60	50	29	98	29	84	58	71	SE	ESE	Fine		
19		.03	53	60	52	29	67	29	56	68	70	E	E	Clo.		Fair

The quantity of Rain that fell in the month of April was 1 in. 90-100ths.

. In consequence of the Artist's delay, the Plate which ought to have accompanied Mr. Painter's Case of Ovarian Fætation, cannot be ready for this Number: it will certainly be delivered with our next.

NOTICE TO CORRESPONDENTS.

We shall be obliged to our excellent Correspondent, "A Physician to a Public Dispensary," to favour us with his name.

. Communications are requested to be addressed (post paid) to Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

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ERRATA IN VOL. XIX.

Page 276, for "magnes. carb. gr. j." read "magnes. carb. ʒj."

377, eleven lines from the bottom of the page, for "fomentations," read "lotions."

442, third line, for "applicator," read "applicetur."

— fourth line, for "vapores," read "vaporis."

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HISTORICAL SKETCH OF THE PROGRESS OF
MEDICINE,

AND OF THE SCIENCES CONNECTED WITH IT,

During the first Six Months of the Year 1823.

IN the view, which we are now about to take, of the progress of medical science during the preceding half year, we shall observe the following physiological arrangement:—

I. GENERAL SYSTEMS.

Nervous Systems.

1. Involuntary Nervous System.
2. Voluntary Nervous System.

Cellular System.

Vascular Systems.

1. Arterial System.
2. Capillary System.
3. Venous System.
 - a. The Blood.
4. Absorbent System.
 - a. Lymphatic.
 - b. Lacteal.

Muscular Systems.

1. Involuntary.
2. Voluntary.

II. PARTICULAR TEXTURES.

Serous Texture.
Glandular Texture.
Mucous Texture.

Fibrous Textures.
Osseous Textures.
Dermoid Textures.

III. PARTICULAR ORGANS.

- | | |
|-----------------------|------------------------|
| 1. Digestive Organ. | 5. Organs of Sense. |
| 2. Respiratory Organ. | 6. Organs of Voluntary |
| 3. Urinary Organs. | Motion, &c. |
| 4. Generative Organs. | |

IV. VIEWS WHICH RESPECT THE RELATIVE CONDITION OF THE TISSUES AND ORGANS, IN THEIR CONNECTED STATE, AND WHICH REGARD THE WHOLE ANIMAL FRAME.

GENERAL ANATOMY.—The most interesting observations that have been made in this department of science relate to the arrangement of the venous system in several classes of animals. Dr. JACOBSON,* of Copenhagen, who has directed his attention to this subject, has shown that in those animals the urinary secretion, as well as the biliary, is derived from venous blood. In our last Historical Sketch we gave M. MAPPE's account of the intimate structure of the liver, and of his conclusion, which is supported by EYSENHARDT's investigations, that the organization of the kidney is similar. May not this circumstance, as well as the close analogy existing between the structure and functions of the same organs throughout the various classes of animals, so strongly and ably insisted on by GEOFFROY-SAINT-HILAIRE, be proofs that secretion does not take place in the kidney until the blood conveyed by the arteries has passed into the venous capillaries, and acquired many of the characteristics of venous blood?

It is well known that in mammiferous animals, "the veins which proceed from the inferior or posterior part of the body meet in one common trunk, by which the vena cava inferior is formed, and the blood conveyed straight to the heart." Dr. Jacobson goes on to state, that "this arrangement of the venous system, however, obtains in no other vertebral animals; and a new and peculiar system of the veins exists which is not directly united with the other veins of the body. By means of the veins which compose this system, the blood which flows back from the middle or posterior part of the body does not go directly to the vena cava inferior, and afterwards to the heart, but is conveyed either to the kidneys, or to the kidneys and liver.

"This system is observed in birds, reptiles, and fishes; and its primary form undergoes three degrees of modification.

"The *first modification*, which is to be esteemed the pro-

* *Isis of Oken* for 1822; and *Edinburgh Medical Journal* for January, 1823.

typo of the rest, exhibits the following form. From the skin and muscles of the middle part of the body branches arise, which form several trunks, passing separately to the kidneys, in the substance of which they again divide into branches, and are there variously distributed.

"In the *second modification*, the veins which return from the posterior part of the body are received into this separate system, of which we are treating. The caudal vein, which brings back the blood from the skin and muscles of the posterior part of the body, divides into two branches, which, having received some veins returning from the middle part of the body, flow to the kidneys of each side, and distribute their branches in the parenchymatous substance of these glands.

"In the *third modification*, the veins of this system are formed in the same manner as in the preceding, only that the caudal, or other vein returning from the posterior parts, gives off a branch to the *vena portæ*. The blood returning from the middle and posterior part of the body in the first and second modification of this system, is conveyed only to the kidneys; but, in the third, to the kidneys and liver. The inferior *vena cava* of the common venous system, in the *second* and *third* modification of this system, is composed of the veins returning from the kidneys and testicles, or ovaries. In the first modification, the caudal vein receives the veins returning from the kidneys, is united with the veins of the testicles or ovaries, and, in this manner, forms the inferior *vena cava*."

No addition has been made to our knowledge of the conformation of the other *general systems* of the body, within the period to which we confine ourselves.

Under the head of *particular textures*, we meet with little of importance.

The intimate structure of *tendons* has engaged the attention of Professor ISENFLAMM, of Erlangen.* This eminent Anatomist has ascertained that the constituent principles of this substance are the same as those of muscles, with the difference only, that tendons appear to contain no salts in their composition. After careful maceration and dissection, he found that they are formed — 1st, of cellular tissue disposed in fine parallel fibres, with the addition of transverse fibres in tendinous membranes; 2d, of animal gluten; 3d, of albumen, which, jointly with the cellular fibres, gives them their satiny appearance. Professor Isenflamm considers that the existence of nerves in this texture is satisfactorily proved by its sensibility in disease, and he very justly con-

* Archives de Méd. Jan. 1823.

4 *Historical Sketch of the Progress of Medicine, &c.*

tends that no vital property can be generated, but only developed, either in this or in any other part, by a morbid condition of structure.

Under that part of our physiological division which relates to *particular organs*, the examination of the structure of the *lungs* by Dr. REISSEISEN* deserves particular notice. This Anatomist has shown that the lobules of the lungs may be considered as ramifications of the trachea, which lose their cartilaginous portion as they divide, and which ultimately terminate in simple membranous cul-de-sacs, and not in common cellular texture. Over each of these a vascular plexus is spread, "arising from the bronchial arteries, out of which the pulmonary veins at once spring; and, of course, the arterial blood is mixed with the venous blood. The bronchial veins, again, do not form a trunk, but open separately into the pulmonary veins, which return the blood to the heart." Dr. R. has demonstrated, in opposition to Haller, that the lungs are well supplied with nerves, not from the intercostal, but from the pneumo-gastric; and he has denied all anastomosis *in the lungs* with the eighth pair. The state of collapse he has considered as the natural state of this viscus.

The structure and movements of the *tongue* have been elucidated by M. BLANDIN† with greater accuracy than heretofore; and the general relations of the *spine* have been satisfactorily viewed by Mr. EARLE.‡ M. GEOFFROY-SAINT-HILLAIRE§ has entered into some details respecting the intimate analogy which he considers to exist between the structure of the skeleton of the articulated and vertebrated animals, in reply to the observations of M. MECKEL: these possess much ingenuity, and evince an intimate acquaintance with the organization of the lower animals, but furnish no additional facts connected with the subject beyond what he had adduced in his former memoirs, and in the first volume of his *Philosophie Anatomique*. An interesting work on human monstrosities¶ has also been published by this distinguished Anatomist, which is destined to form a second volume of the one just mentioned, as well as a separate production. It is chiefly intended to illustrate his fundamental views, namely,

* Salzburger Zeitung Medizin, &c.; and Jour. of For. Med. April, 1823.

† Archives de Médecine, Avril, 1823.

‡ Philosophical Transactions, Part II. 1822.

§ Archives de Médecine, Mars, 1823.

¶ Philosophie Anatomique des Monstruosités Humaines, etc. 8vo. Paris, 1823. Accompagné d'un Atlas in-4to.

the theory of analogous organization, the principle of connexions, the affinity of organic elements, the mutual relation or balancing of the organs; and to apply them to the study of human anatomy.

Dr. DUGÈS* has entered with much research on the examination into the causes of the difference of monstrosities of the cranium and spine; and has, conformably to existing opinions on the subject, referred such deviations of organization to chronic dropsy occurring, in these situations, at an early period of foetal existence.

PHYSIOLOGY.—Proceeding according to the order already pointed out, the views which relate to the *nervous system* first claim our attention. Amongst these the researches of M. FLOURENS, already noticed in a former Number of this Journal,† in many respects deserve particular notice; but, although very important, they appear not to be possessed of so much originality as was at first supposed: indeed, they can only be viewed as a repetition of the investigations of Professor ROLANDO, of Turin, which were published in 1809.‡ The experiments of both these physiologists are important, inasmuch as they disclose to us a more precise knowledge of the functions of several parts of the cerebrum and cerebellum than we formerly possessed. As the investigations of M. Flourens belong to the period embraced by this sketch, we shall notice the conclusions which have been drawn from them by the reporters to the Institute; and we are the more inclined to confide in them when we find that they agree with the researches of M. Rolando, which were even more varied and extended than those of the French physiologist, and that the principal experiments were performed by M. Flourens in the presence of MM. Portal, Berthollet, Pinel, Dumeril, and Cuvier.

The questions proposed by M. F. and which he has endeavoured to ascertain by experiment, are:—1st, From what points of the nervous system artificial irritation may set off to arrive at a muscle. 2d, To what points of this system an impression must be propagated to produce sensation. 3d, From what points voluntary irritation descends, and what parts of this system must be influenced to produce it regularly. These questions he has only considered in relation to

* Rev. Méd. Avril, 1823.

† REPOSITORY for February, 1823.

‡ Saggio sulla vera Struttura del Cervello dell'Uomo e degli Animali, e sopra le funzioni del Sistema Nervoso. Par L. Rolando. Sapari, 1809; and Archives Gén. de Médecine, Mars, 1823.

vertebrated animals, and to their nervous system of animal life.

M. Flourens commenced with the *nerves*, and fully confirmed the views usually entertained respecting their functions. He has shown, in a satisfactory manner, "that, in order to effect contraction, a free and continued communication is requisite between the nerve and muscle; and that, to produce sensation, a similar communication with the brain is equally necessary. Hence he concludes, that neither contraction nor sensation belong to the nerve; that these two effects are distinct; that they may take place independent of each other; and that these propositions hold good, at whatever part, and in whatever branch, of a nerve the communication is interrupted.

"Employing the same method with regard to the *spinal marrow*, he has arrived at similar conclusions. When it is irritated in any given point, contractions are excited in all the muscles which derive their nerves from below this point, if the communication remains free; but not if the communication be intercepted. Exactly the reverse obtains with regard to sensation; and, as in the nerves the government of the will requires the same freedom of communication as sensation, the muscles beneath the intercepted part no longer obey the animal, and he does not feel them: in fine, if the spinal marrow be intercepted at two points, the muscles which receive their nerves from this interval experience contractions alone; but the animal does not command them, nor receive from them any sensation." M. F. has farther inferred, from his experiments respecting the functions of the spinal marrow, that sensation and contraction belong no more to it than to the nerves. He next directed his researches to the *brain*, in order to ascertain the point whence irritation departed, and the point where sensation arrives, and to determine their respective co-operation in acts of volition.

Advancing from the medulla oblongata towards the hemispheres, M. Flourens first examined how far it was possible to go, and still produce sufficient irritation on the muscular system, when he arrived at a point where these irritations disappeared: "then, taking the brain at the opposite part, he irritated it at points deeper and deeper, as long as he did not act upon the muscles; and, when he did begin to act upon them, he found himself at the same point where the action had ceased in ascending. This part is also that where the sensation of irritation applied to the nervous system likewise ceases: above this, punctures and wounds do not excite pain. Thus M. Flourens pricked the hemispheres

without producing contraction of the muscles, nor the appearance of pain in the animal; he removed them in successive slices: he did the same with regard to the cerebellum; he removed at once the hemispheres and cerebellum. The animal remained passive. The corpora striata and the optic thalami were attacked, and removed without any other effect: the iris was not contracted, nor even paralysed. But, when he pricked the tubercula quadrigemina, trembling and convulsions began, and these increased in proportion as he penetrated into the medulla oblongata. Pricking the tubercles, as well as the optic nerve, produced quick and continued contraction of the iris. These experiments agree with those of LORRY, published in the third volume of the '*Mémoires des Savans étrangers.*' 'Neither the irritation of the brain nor of the corpus callosum itself produce convulsions: it may even be removed with impunity. The only part among those contained in the brain which has appeared uniformly and universally capable of exciting convulsions, is the medulla oblongata: it is this part which produces them to the exclusion of every other.' They contradict the experiments of Haller and Zinn with regard to the cerebellum; but, from what M. Flourens has seen and pointed out, it appears that these physiologists had touched the medulla without being aware of it. The author concludes that the medulla oblongata and the tubercles are (in his language) irritable; which in ours means that they are conductors of irritation, like the spinal marrow and nerves, but that neither the cerebrum nor cerebellum possess this property. The author hence concludes, likewise, that these tubercles form the continuation and superior termination of the spinal cord and medulla oblongata; and this opinion is in conformity with their situation and anatomical connexions."

Wounds of the brain and cerebellum do not excite pain any more than convulsions. Hence M. Flourens infers that to them the impression received by sensible organs must be conveyed, in order that the animal may experience a sensation. He appears to have established this proposition in a satisfactory manner with regard to the senses of sight and hearing; for when both lobes of the cerebrum are removed, the animal becomes both blind and deaf. "Instead of saying, with the author, that the cerebral lobes are the only organs of sensation, we would restrict ourselves to ascertained facts, and content ourselves with saying that these lobes are the sole receptacle where the senses of sight and hearing can be perfected, and become perceptible to the animal. If we wished to add to this, we would say that they are likewise those where all the sensations take a distinct form, and leave

durable traces on the memory,— that they serve, in a word, as the seat of memory ; a property, by means of which they furnish the animal with materials for judgment. This conclusion, thus reduced to proper terms, becomes the more probable, in that, besides the verisimilitude which it receives from the structure of these lobes and their connexion with the rest of the system, comparative anatomy offers another confirmation in the constant relation of the volume of these lobes with the degree of intelligence of the animal."

M. Flourens next examined the effects which follow the extirpation of the tubercula quadrigemina. "The removal of one of them, after a convulsive movement, which soon ceases, produces, as a permanent result, blindness of the opposite eye and involuntary staggering (*tournoiement*); that of both tubercles renders the blindness complete, and the staggering more violent and long-continued. The animal, however, retains all its faculties, and the iris continues contractile. The deep extirpation of the tubercle, or the section of the optic nerve only, paralyzes the iris: from which the author infers, that the removal (*ablation*) of the tubercle only acts as the division of the nerve would do; that this tubercle is only a conductor with regard to vision; and that the cerebral lobe alone is the seat of the sensation, the point where it is consummated, and passes into perception."

M. F. next investigated the functions of the *cerebellum*, and found that, during the removal (*ablation*) of the first layers, "there appeared only a slight weakness and want of harmony among the movements. At the middle layers, a disturbance nearly general was manifested. The animal, in continuing to see and hear, only executed quick and irregular movements: the faculty of flying, walking, and keeping itself standing, were lost by degrees. When the brain was cut off, this faculty of performing regulated motions had entirely disappeared. Placed upon the back, he did not rise; but continued to see the blow which menaced him; he heard sounds, and endeavoured to shun the danger which was threatened: in a word, feeling and volition were retained, but the power over the muscles was lost; scarcely could he support himself with the assistance of the wings and tail. In depriving the animal of the brain, it was thrown into a state resembling sleep: in removing the cerebellum, it was brought to a state resembling intoxication."

The reporters to the Institute on the inquiries of M. Flourens have drawn the following conclusions "from a rigorous examination of the facts which he has established.

"The integrity of the cerebral lobes is necessary to the exercise of sight and hearing: when they are removed, the

will no longer manifests itself by voluntary acts. However, when the animal is immediately excited, he performs regular movements, as if endeavouring to avoid pain or inconvenience; but these movements do not effect his purpose, most probably because the memory, which has been removed along with the lobes which constituted its seat, no longer affords grounds or elements of judgment: these movements have no consistency, for the same reason, that the impulse which caused them neither leaves any remembrance nor permanent volition. The integrity of the cerebellum is necessary to the regularity of locomotion: let the brain remain, the animal will see, hear, and have evident and powerful volition; but, if the cerebellum be removed, he will never find the balance necessary to locomotion. As to the rest, irritability remains in parts without the brain or cerebellum being necessary. Every irritation of a nerve brings it into play, in muscles to which it is distributed: every irritation of the spinal marrow excites it in all the members beneath the point of its application. It is quite at the top of the medulla oblongata, at the point where the tubercula quadrigemina join it, that this faculty of receiving and propagating irritation on the one hand, and pain on the other, ceases. It is this point at which sensation must arrive in order to be perceived: it is from hence that the mandates of the will must emanate. Thus, the continuity of the nervous organ from this point to the parts is requisite for voluntary motion, and for the perception of impressions, whether external or internal.”*

The functions of the *vascular system* have received no inconsiderable share of attention. The very interesting investigations of M. FODERA on absorption and exhalation are calculated to enlighten our views, and to lead to still farther inquiry: we refer our readers to the full account which we gave of this physiologist's memoir in a former Number.†

While researches respecting absorption have been undertaken in France with becoming zeal, American Physicians have not neglected to distinguish themselves in the same path of inquiry; and, although they may appear the less original, they certainly have not been less persevering and successful in their investigations. The results of the experiments of Drs. LAWRENCE and COATES, on the absorbing power of the veins and lymphatics,‡ were given in our

* Journal de Physiologie, October, 1822; and Medical and Physiological Journal for June.

† REPOSITORY for May, 1823.

‡ Philadelphia Journal, No. X. These experiments, which are VOL. XX.—NO. 115. c

preceding Number. These experiments were extremely numerous and judiciously varied; and they altogether furnish valuable materials for physiological inference, as well as much requisite confirmation of many of the views of MAGENDIE as to the functions of the venous capillaries.

The researches of Mr. BRODIE on the effects produced by the bile in the process of *digestion* have confirmed, in part, the views usually entertained respecting the uses of this secretion in the animal economy, and pointed out the part which it chiefly and uniformly performs. Together with its offices in changing the nutritious part of the chyme into chyle, and in separating from it the excrementitious matter, it was usually supposed that the more acrid and resinous portion of the bile combined with the excrementitious portions of the chyme, and thus became a salutary tonic and stimulant to the intestinal surfaces as it passed along them: this opinion, although plausible, appears to rest upon insufficient evidence, and is even contradicted by several of the phenomena which manifest themselves in the course of diseases affecting the digestive canal and biliary organs. For the results of Mr. Brodie's interesting investigations, we refer our readers to a former Number.*

We lately took occasion † to notice the experiments of Dr. EDWARDS, of Paris, on some important points connected with the *function of respiration*. We then mentioned that the observations of this intelligent physiologist authorized the conclusion that azote is both absorbed into, and discharged from the circulating fluid, and that each of these operations is regulated by the circumstances of the individual at the time. Independently of the satisfactory nature of the experiments, whence Dr. Edwards has drawn his inferences, there are many collateral proofs that may be brought to their support, derived from the manifestations of the animal economy both in health and in disease; and we have little doubt that not only is azote, but that other gases are also absorbed into, and discharged from the circulation, in a greater or less quantity, according to the varying state of the vital energies of the system. Even the formation of carbonic acid gas in the lungs has been, in our opinion, explained too exclusively after a single process. When the theory of the absorption of oxygen was dismissed in favour of that which contended for the discharge of carbon from the blood, either in its pure state or in that of an hydrate, no participation in

fully detailed in this Number of Chapman's Journal, amount to one hundred and six.

* *REPOSITORY* for February, 1823. † *Ibid.* for May, 1823.

the process, by which the carbonic acid was formed, was allowed to the previously received opinion: however, it still appears to us a matter of doubt how far either function predominates; for we are much inclined to think that both operations go on simultaneously, and that while a portion of the carbonic acid gas is given out, already formed, from the blood, it is accompanied with another portion of free carbon, or an oxide of carbon, or even with an hydrate of the same substance, which combines with an additional quantity of oxygen in the lungs, and thus forms the whole of the carbonic acid in question; and that, at the same time, a portion of oxygen is absorbed, which combines with the carbon in the blood, and there generates the carbonic gas or oxide of carbon, which forms a part of the matters discharged from the blood in the lungs. These processes may vary, and either may predominate according to the state of the vital influence at the time, under whose control they are immediately and completely placed.

The experiments of Dr. CARSON have directed the attention of physiologists in this country to the state of the lungs themselves during respiration, and under the various influences to which they are usually subjected either by accident, by operations, or by disease. "Dr. Carson had inferred from his experiments, that it is possible to collapse one of the lungs, and to retain it in that state, *ad libitum*, by keeping open the communication between the cavity of the chest and the external air; and further, that upon allowing the opening to close, the lung, in a given time, will recover its wonted function, thereby rendering it practicable, when conceived necessary, to place the opposite lung under the like discipline." Dr. C. had very ingeniously proposed the application of his views to the cure of phthisis pulmonalis, so much confidence did he place in the results of his experiments; and has even, we believe, reduced his theory to practice, but with what success we are not yet informed. In order to examine the stability of the hypothesis, Dr. DAVID WILLIAMS, of Liverpool, instituted several experiments, in the presence of Dr. TRAIL and others, which contradict some of the chief positions held by Dr. Carson. After having detailed his experiments, Dr. Williams has drawn the following inferences from them: — *

"1. That a lung will not collapse from exposure to the atmosphere as long as respiration is carried on by the opposite one, and the auxiliary respiratory powers are not restrained.

" 2. That a lung possesses for a time, independently of the influence of the diaphragm and intercostal muscles, if respiration is carried on by the opposite lung, a peculiar motive power, the source of which I do not pretend to explain.

" 3. That a sound lung soon regains its full power of expansion, when the pressure of the exterior air is removed.

" 4. That air freely and uninterruptedly admitted into both cavities of the chest simultaneously, through tubes of a certain calibre, will not collapse the lungs, if the auxiliary respiratory organs are unrestrained.

" 5. That air admitted into both the cavities of the chest (of a middle-sized dog) simultaneously, through apertures of an inch and better in length in the intercostal spaces, will not collapse the lungs, provided the animal is allowed unconfined the use of his respiratory organs.

" 6. That a sound lung never fills the bag of the pleura."

Dr. W. has very justly observed, " that if the last physiological inference is correct, it is highly interesting in a pathological point of view. It enables us to explain how hydrops thoracis, or that species of it, hydrops pleuræ, may exist to a certain extent, without being attended with any symptoms indicating the presence of the disease, as related by numerous medical authors." We can also more satisfactorily account how the lung so frequently escapes " when weapons penetrate the cavity of the thorax; and how the extravasation which follows, if not considerable, produces but little derangement. It may also have a practical utility; for it informs the Surgeon that the lung descends to a certain point only, so that he need not be afraid of wounding it, should an operation be required below that position."

The most interesting views connected with the *organs of sense* which we have to record are those entertained by Mr. CHARLES BELL respecting some of the functions of the eye.* This physiologist, in pursuance of his investigations of the nervous system, has examined the motions of the eye, in illustration of the uses of the muscles of the orbit; and has shown, in the first place, that there are motions performed by this organ not hitherto noticed. Every time the eyelids descend to cover the transparent part of the eye, the eyeball ascends, or suffers a revolving motion. If this were not the case, the surface of the eye would not be moistened, nor freed from offensive particles. He has proved, in the next place, that during sleep the eyeball is turned up, and the cornea lodges secure and moistened by the tears, under cover of the upper eyelid. He considers that these motions

* Annals of Philosophy for May, 1823.

are rapid and insensible, and that they are provided for the safe-guard of the eye. The other motions are voluntary, and for the purpose of directing the eye to objects.

Mr. Bell next examined the actions of the muscles of the eyeball, and distinguished them, as usual, into the straight and oblique muscles. It has been supposed, hitherto, that both these classes of muscles were voluntary; some describing the oblique as coadjutors of the recti muscles, and others as opponents to the recti; but Mr. Bell has viewed the oblique as provided for the insensible motions of the eyeball, and the recti for those motions which are directed by the will, and of which we are conscious.

Mr. B. has also proceeded to show, that the consciousness of the action of the recti muscles gives us the conception of the place or relation of objects; and has endeavoured to prove, by observation and experiment, that the actions of the straight muscles are inseparably connected with the activity of the retina; that is, with the enjoyment of vision: but that the moment the vision is unexercised, the eyeball is given up to the operation of the oblique muscles, and the pupil is consequently drawn up under the eyelid. "Hence the eyes are elevated in sleep, in faintness, and on the approach of death; and that distortion which we compassionate as the expression of agony, is the consequence merely of approaching insensibility."

The most important additions which we can refer to the physiology of the *generative functions*, are the interesting observations which have lately been made by Dr. PROUT. The conclusions which he has drawn from his interesting experiments on the changes which take place in the fixed principles of the egg during incubation, are already before our readers.* The memoir of M. PANDER, of Wurtzbourg, on the changes which are observed in the egg during the first five days of its incubation, which was published in Germany in 1817, has been republished in France by M. BRESCHET,† where it was previously but little known: we believe that the observations of M. Pander have never reached this country: we are induced to mention them at present in order to turn that portion of scientific attention to them which they fully merit. It is impossible for us to convey any abstract of their very minute details which could be satisfactory to our readers, even were they legitimately before us, within the space to which we are necessarily confined.

* REPOSITORY for February, 1823.

† Archives Gén. de Méd. Fév. et Mars, 1823.

PATHOLOGY. — Commencing our view of the progress of this department of medical science with the few additions which have been made to the pathology of the *nervous system*, we find these entirely confined to that part of it which is immediately concerned in sensation and volition. Amongst the various derangements of structure to which the brain is subject, none appears more interesting than those which are connected with the formation of this organ; for not only are they important in themselves — as species of organic lesions requiring to be changed to that state which may be compatible with the due exercise of the vital actions, but they are likewise interesting as they furnish some of the strongest proofs we are able to obtain respecting the extent of function of this organ, and the exact relations which it holds, both in the successive stages of its production and during its perfection, with the general systems and particular organs of the animal body. In these points of view the case of congenital hydrocephalus, recorded by Mr. DENDY in our preceding Number, seems extremely interesting.

The effects of violent mental emotions in producing structural derangement in the brain have been illustrated by two cases: in the one recorded by M. DUPARCQUE, a singular tumour was found developed in one of the ventricles of the brain, and complicated with effusion into these cavities;* in the other, published by M. GASTÉ, this organ was greatly softened, and contained an abundant serous effusion in its ventricles.†

M. ROCHE has recorded two instances of loss of sensation in one half of the body, while voluntary motion was preserved. On dissection of the one which terminated fatally, in which there had been total want of sensibility on the left side, the inferior portion of the middle lobe of the cerebrum, on the right side, was softened in an unusual degree, and presented, in its medullary substance, small black grains, from the size of hemp-seed to that of millet-seed, apparently the result of small effusions of blood into the cerebral texture. The ventricle of this side contained a considerable quantity of a reddish serosity. The left side of the brain and its meninges were sound. Professor LALLEMAND has recorded, in his second letter on the pathology of the brain, three cases of inflammation of the same portion of the middle lobe of this viscus, wherein paralysis was present, but not accompanied with anæsthesia, which was so remarkable in this instance.‡

* REPOSITORY for June, 1823.

† Journ. Univers. November, 1822.

‡ Ibid. Nov. 1822.

A fourth part of Professor Lallemand's interesting researches on the pathology of the encephalon, which were noticed in our former retrospect, has lately appeared. It embraces the subject of encysted abscess of the brain, occurring in an idiopathic form, in the course of, or as a consequence of other diseases, and as an effect of external injury. The particular point in the pathology of the encephalon which Professor Lallemand has illustrated in this Number, and placed in a more satisfactory point of view than any of his predecessors, is the frequent occurrence of encysted abscess, and, indeed, of other organic lesions of the brain, as a consequence of inflammatory affections of the ear. In this country, we regret to find that the connexion of the disorders of this organ of sense with other affections, especially those of the encephalon, is little understood, and less attended to, by those who take the derangements of this sense under their fostering care. Nor is such ignorance, indeed, to be wondered at, when it is considered that, by some singular fatality, the disorders of those very organs, whose complex formation, and intimate connexions and relations, with the most important part of our organization, on the one hand, and with the mental manifestations of our nature on the other—even those derangements which require a more intimate acquaintance, than any other to which the body is liable, with the operations of, and laws which govern the animal economy—with the very philosophy of our physical and moral nature,—are generally committed to the care of the most wretched empirics that ever disgraced a profession.

Few diseases have been more investigated than epilepsy during the present age; and within the period allotted to this sketch it has received a due portion of attention; we wish we could add, that the success of those investigations was commensurate with the ability with which they have been prosecuted. The work of Dr. COOKE on this disease, to which we now more particularly allude, has already come before us.* The connexion of mental derangement with epilepsy is too evident not to mention at this place the work of Dr. WILLIS on the former subject. The observations of this Physician possess some interest, chiefly, however, from the circumstance of the actual propriety of some of his views, and not from their novelty, nor from the manner in which he has illustrated them. The current of opinion has lately set strongly in favour of the supposition—for it was no more than supposition,—that, wherever symptoms appeared which

* REPOSITORY for March, 1823.

might be referred to cerebral excitement, there must consequently be inflammation, general plethora, or local determination. That the last named state of the circulation may be often present under such circumstances, we will readily allow; but that either of the other two conditions should exist, or be necessary to the production of the manifestations in question, is perfectly gratuitous, and what we positively deny. In support of this we can refer to facts derived from experiment and observation. Bleed a man, or any other animal, frequently, largely, but gradually, either when in good health, or when suffering under some disorder not connected with cerebral excitement: as a consequence of such conduct, if the depletion be carried too far, we shall have symptoms denoting determination to the brain; if farther depletion be instituted, delirium will generally supervene; and even if depletion be carried so far as to produce death, the cerebral derangement will be manifest to the last moment of existence: on dissection, while all the other textures shall be found entirely deprived of blood, the brain will generally evince more than natural vascularity, and always an infinitely greater fulness of blood, relatively, than any other part of the body. We will allow that those effects are not observed if very large quantities of blood are lost, so as to deprive the animal of life in a very short space of time; but here the reason is obvious — the animal dies before the vascular system is accommodated to the mass of blood circulating in it. Now, we assert that we have observed those phenomena which we have described, and have seen those appearances in individuals whose life we considered to have been lost by ultra-depletion; and we farther know that the same phenomena have been uniformly noticed in experiments on the lower animals. But we shall be excused if we briefly illustrate this important point by more familiar examples. How often is it observed in profuse uterine hæmorrhage, that when the patient is but just saved from the immediate loss of blood, great care is requisite to save her from the nervous derangement which uniformly supervenes! Irritative fever is always the consequence, and is more immediately the consequence of the local determination and irritation to which the brain is subjected, notwithstanding that the state of the parts concerned in the process which she had previously experienced might be supposed to divert irritation from that organ. In such cases the arteries running to the head beat violently; sensation is quick and lively; the least irritation of the organs of sense, or excitement of the moral affections, is apt to induce delirious manifestations; the lower extremities are pale, shrunk, and cold, while the head is hot and

painful, &c. Now, we all know the treatment which alone succeeds in those cases, which treatment farther illustrates that peculiar state of the vascular system, and of the blood itself, in which the cerebral excitement originates. But not only is local determination, and especially to the brain, the consequence of depletion; it still more familiarly supervenes to a low state of the vital energies of the system: the individual, in whom those energies are perfect, seldom is subject to those disorders which depend upon local plethora or excitement: it is principally those, in whom the vital or nervous powers of the constitution are greatly weakened, who experience local determinations, or those derangements of the circulation in the brain which are evinced by corporeal and mental derangements. It is chiefly to those individuals that the dictum, "*ubi irritatio ibi fluxus*," is strictly applicable; and whether the irritation be of a physical or moral nature, the effects will be apparent and commensurate with its intensity, or with that disposition of the system to which we have alluded.

While we thus contend against certain doctrines which have been lately carried to a hurtful and unscientific extent, let us not fall into the opposite extreme, but let us seek after an intimate acquaintance with the operations and laws of nature, and make them our guide: under such direction we shall shun the more prominent difficulties which surround the exercise of our Profession, and in which we shall inevitably become entangled as soon as we lose sight of such guidance, and generalize our pathology and practice beyond the data which a sound observation and experience of the manifestations of nature authorize.

The connexion of apoplectic and paralytic seizures with organic disease of the heart, the latter derangement predisposing and inducing the former, has been contended for by Dr. CRAIGIE, in a continuation of his memoir on the pathology of the brain.* We were not a little surprised to find Dr. C. assert, in this part of his paper, that it did "not appear that any pathologist has particularly examined those effects to which the diseases of circulation give rise in the cerebral organ." Now, unless Dr. C. should quibble about the word *particularly* which he has used, he will find the connexion for which he contends noticed by most of the writers on apoplexy since the time of BAGLIVI: indeed, this distinguished pathologist observed, in the dissection of the celebrated MALPIGHI, who died apoplectic after the accession of a paroxysm of palpitation of the heart, to which he

* Edinburgh Medical Journal for January, 1823.

had been subject, the left side of the heart greatly enlarged, and copious extravasation of blood into the right ventricle of the brain. But not only has the coexistence of these lesions been frequently noticed, but the occurrence of effusion of blood within the brain has been shown to be no unusual consequence of hypertrophy of the left side of the heart, as well as of ossifications or other lesions of its valves or of its substance. M. RICHERAND observed this connexion of disease in the great CABANIS, whose case he related to the *Ecole de Médecine*, and he afterwards asserted the relation to be one of cause and effect which he had verified by frequent observation. PORTAL and TESTA supported the same opinion, and M. BRICHETEAU has endeavoured to establish it still farther both by physiological inference and the evidence of actual observation. But without leaving our own country, Dr. CRAIGIE might have observed this connexion insisted on in the very Journal in which he writes. The January Number of that work for 1817 contains an article translated from the German of K. SPRENGEL, in which reference is made to the account of the case of the late Crown Prince of Sweden, in whom this connexion of disease was observed on dissection. The history of this case was published by ROSSI in HORN'S Archives for 1822; and Sprengel, at the place where he referred to it, considered the position, that apoplexy often arises from diseases of the heart, to be satisfactorily proved. Dr. ABERCROMBIE, whose originality has never been conspicuous, has alluded to the same subject, in a subsequent volume of the Edinburgh Journal; and Dr. HUTCHINSON has adduced proofs in support of the same position in a contemporary work.* Why, therefore, has Dr. CRAIGIE been ignorant of the very satisfactory illustrations which the very topics on which he writes had received, before he turned his attention to them; and why does he profess to have been the first to elucidate those interesting points in pathology, without having ascertained what degree of notice they had received from preceding inquirers, and whether they had not been more fully and more satisfactorily explained by his predecessors and contemporaries than his opportunities could furnish him with the means of doing? But, although he insists so strenuously, and as he says so originally, on the dependence of apoplexy on disease of the heart—which dependence we will only allow to be occasional, and to be neither absolute nor necessary—he has neglected to adduce that species of structural derangement of this viscus, which,

* Medical and Physical Journal, Vol. XLIII.

in our opinion, is the most frequent antecedent of apoplectic seizures, and has confined himself entirely to one class of organic derangements of the heart, which seems to be less frequently productive of apoplexy than those which he has overlooked. From the very few instances adduced by him, in which the connexion in question was observed, he has drawn the following inferences:—

“ 1st, It is quite obvious, that several maladies of the heart, such as ossification of the left side, or of the artery connected with it; ossification of the mitral valve; of the semilunar valves; arctation of the apertures, either auriculo-ventricular, or aortic, have a tendency to terminate in extravasation within the cranium, producing apoplexy, paralysis, or a comatose state terminating in death.

“ 3d, It is by no means difficult to see how these effects in the cerebral organ result from an irregular and disordered action of the heart. The difficulty which the blood experiences in passing either, 1st, through the auriculo-ventricular opening; 2d, the aortic orifice; 3d, along the aorta, necessarily produces a stagnation and congestion; 1st, in the pulmonary veins; 2d, in the pulmonary artery; 3d, in the right side of the heart. The effect of this is to retard or impede very remarkably the return of the blood from the cerebral veins, and consecutively either to distend them, or, unless they are exceedingly strong and resisting, to rupture them, or to occasion an effusion of the serous part of the blood, as we find in other examples of obstructed venous circulation.”

Connected with the pathology of the *nerves* themselves, we have been furnished with little that appears to us to be entitled to notice. A case of neuralgic affection of the face, occasioned by the irritation of a fragment of china which had been fourteen years imbedded in the substance of the cheek, has been published by Mr. JEFFREYS.* The removal of this substance immediately relieved the painful affection, which had several of the characteristic symptoms of idiopathic neuralgia.

A very interesting case of that peculiar morbid state of structure, which has lately been well described by LAENNEC, BRÉSCHE, and other French pathologists, under the name of melanosis, from the colour which it generally presents in the various organs, has been communicated to the readers of this Journal by Sir ANDREW HALLIDAY.† From the manner in which this affection is disseminated throughout all

* Medical and Physical Journal for March, 1823.

† REPOSITORY for June, 1823.

parts of the body, and from the characters of its structure, it seems to be clearly referrible to a diseased state of the *cellular texture*, probably arising from some peculiar derangement of the nutritious capillaries which supply that tissue, and which derangement is not confined to the cellular substance forming the matrix of one particular organ, but is extended to all parts of the system where this texture is most abundant, and least interrupted by tissues of a denser or of a different structure. Hence the more abundant development of these morbid formations in the internal viscera, beneath the integuments, &c.

Under the pathology of the cellular tissue, the nature of tuberculous derangements comes to be considered. M. DUPUY, who has paid very considerable attention to those alterations of structure in the lower animals, and whose excellent observations have been long since submitted to pathologists, has continued his investigations, and, with the assistance of M. LASSAIGNE, has submitted the concretions, into which they frequently degenerate, to chemical analysis. For this purpose he took those found between the laminae of the mesentery of a bull affected with tubercular phthisis. These concretions were small, white, and hard grains united by a mucous envelope; and consisted chiefly of phosphate of lime, with carbonate of lime and animal matter. M. DULONG, who has examined those formed in the lungs of a cow that died of tuberculous phthisis, found their composition to be similar to that given by M. Dupuy. M. Lassaigue has informed us that these pulmonary concretions, which have come under his observation in the human subject, have the strictest analogy with those which he has examined in the lower animals.*—The ingenious opinions of Dr. BARON respecting the origin, development, and relations of tuberculous formations, have been submitted to our readers † in a former Number.

Proceeding next to view the progress of the pathology of the *vascular system*, petechiæ hæmorrhagicæ first attracts our attention. A case of this disorder has been recorded by Mr. PRETTY, which is, in some respects, calculated to advance our knowledge of the nature of this species of vascular derangement, and to point to a rational mode of cure.‡ Connected with these important topics, we refer our readers to some observations which we made, in our former Historical Sketch, and we now entreat them to compare the case to which we have just referred with those which

* Rev. Méd. Janv. 1823. † REPOSITORY for March, 1823.

‡ Medical and Physical Journal for April, 1823.

we gave an account of on that occasion, and with the inferences which we then drew from them. One of the most important points connected with Mr. Pretty's case was the state of the blood, which seems to be characteristic of the complaint. He has informed us that "the blood first drawn exhibited no serum for the space of about eight hours; but on the next day, after twenty hours standing, a small quantity appeared. One teacupful of the second bleeding showed a coat of coagulable lymph half an inch thick, like very soft jelly; and with the crassamentum very loose, and so tender as to be broken down very easily into a soft pulpy mass. In this cup there was little or no serum. The other portions of blood, which were not taken with an uninterrupted stream, showed no buffy coat and very little serum: it seemed as though the blood had become so dissolved or altered as to be unable to separate in the usual way."

On the subject of inflammation, an interesting memoir has been published by M. RAYER.* This pathologist, however, has chiefly confined his researches to that inflammatory state of the capillaries which induces ossification of the tissues which are the seat of such derangement, and has viewed ossification as one of the terminations of phlegmasia. M. Rayer has treated this subject in so full and instructive a manner, and has imparted so much interest to it, by the very comprehensive views which he has entertained respecting it, that it is impossible to convey any satisfactory account of his investigations within the limits of this sketch. We expect to have a future opportunity of placing an analysis of this very excellent memoir before our readers.

The very interesting cases published by Dr. BOUILLAUD are well calculated to elucidate the nature of many cases of serous accumulations occurring either in the extremities or in the cavities of the body.† They farther lead us to suppose, that many instances of those affections which have been usually referred to inflammation of the absorbents, have been really inflammation of veins, producing effusion of coagulable lymph from their internal membrane, and consequent obstruction to the flow of blood along their canals, with all the phenomena which may be supposed to result from such a state, combined with the usual characteristics of inflammatory action occurring in serous textures. Against the opinion that such affections are seated in some of the veins, and not in the absorbents, it may be urged, that if the veins be the parts affected, how is it that the inflammation does not more

* Archives Gén. de Méd. Mars et Avril, 1823.

† REPOSITORY for May, 1823.

frequently extend towards the large trunks until it reach the heart; but it should be recollected that it is characteristic of inflammation, taking place in serous tissues and in a healthy constitution, to throw out a copious deposit of coagulable lymph; which, while it completely obstructs the vessel, serves at the same time to circumscribe the inflammatory action by what has been usually called the adhesive process. We have always observed in those cases of inflammation of the serous coat of either the venous or arterial system, which possess a tendency to spread, or which actually do extend to the centre of the circulation itself, that there has been some fault in the habit of the individual so affected, that the inflammation has presented those appearances which have been denominated erysipelatos, and that the effusion from the internal surface of the vessels has not been sufficiently consistent to withstand the current of the blood, but has been washed along with it, and has left the serous surface exposed and inflamed; whereas inflammation so situated, in sound constitutions, has given rise to an effusion of lymph possessing all the properties and appearances of that which takes place in those textures during the most active inflammatory action; and while, in the former case, the effusion has nearly resembled serum, in the latter it approached to fibrin, and has presented similar characters as that which is poured out in the adhesive inflammation. The actual nature of venous or arterial inflammation is of the greatest moment in practice; for in those species of it which, owing to debility or other faults of habit, are inclined to spread, it becomes a rational indication to adopt such measures as may exalt the vital energies, and thus enable the constitution to assume that action which is requisite to the production of coagulable lymph, and, consequently, of the adhesive process, as the readiest and safest mode of arresting the progress of the disorder.

After noticing those views which relate to the state of the vessels, those which respect the condition of the fluid circulating in them come under consideration. Connected with this subject — a subject of no mean importance, we have had some excellent observations from Dr. BARLOW, of Bath,* who considers that a great proportion of the diseases of those who enjoy good circumstances of life, arises from a state of vascular plethora. "If more food be assimilated," he has observed, "than the usual waste of the body requires for its repair, a state of repletion must be the natural and inevitable

* Essay on the Medical Efficacy and Employment of the Bath Waters, &c. &c. London, 1823.

consequence. But repletion may also take place under a moderate, and even abstemious supply of food, when, from a sedentary life, inactive habits, or any defect in the functions of the several emunctories, the necessary excretions are inadequately performed." This proposition he has made the basis of his pathology; and has illustrated it in an interesting manner.

We refer our readers to the interesting experiments of M. MAGENDIE, detailed in a former Number,* on the effects of putrid substances when injected into the circulation. The inquiries of this physiologist have confirmed, in a satisfactory manner, the experiments of M. GASPARD,† and farther evince the influence of the state of the circulating fluid in the production of diseases, especially of those which affect the whole frame.

Amongst those disorders that may, in the present state of our knowledge, be referred chiefly to the *absorbent system*, or to its functions, none possesses greater interest, or ought to claim more attention from the pathologist, than that which results from slight wounds received in dissection. The frequent occurrence of this dangerous accident, from the greater and more widely diffused spirit of pathological research in the Profession, should bespeak from its members a proportionate share of inquiry into the subject. At present, it requires every elucidation, for nothing is known of the nature of the derangement to which it gives rise, of the textures or systems of the body which it chiefly affects, or of the process which it observes, from the inoculation of injury to the period of its fatal termination. The few instances of post mortem inspection which have been recorded give us very little information as to its pathology, and certainly not any on which we can found rational opinions of its treatment. In those cases in which inspection has really been made, the inquirer has most unaccountably been contented with looking into one, or two, at the most, of the large cavities of the body; as if any thing could be observed, in such situations, beside the last consequences of the constitutional derangement. But has the internal coat of the veins been examined from the point of injury along their trunks to the right side of the heart? Has the heart itself, and the state of the blood contained in it and in the large venous trunks, been looked into? Have the absorbents been inspected in their course through the glands, until they reach the large veins; or has the internal tunic of the arteries been observed? Has the appearance of the nerves, from the part in which the

* REPOSITORY for April, 1823. † Ibid. for June, 1822.

injury was received until they terminate in the spinal cord, been noticed? And finally, have the spinal cord itself, the brain, and other parts of the nervous system, been satisfactorily viewed? If, unfortunately, fatal instances of this dreadful affection shall continue to occur, the common interests of the Profession require that it should be more narrowly looked into; and we would beg leave to suggest that those points of inquiry be not neglected. The very interesting case of Mr. WANSBROUGH,* as well as the history of other cases of this description, which have been circumstantially detailed, would lead us to suppose, that inflammation of the veins formed, at least, a part of the morbid actions induced in the system by this animal poison—if, indeed, it may be considered as such; and it also seems not improbable that the nervous system, first, of the part injured, and, consecutively, of the whole frame, is impressed by the inoculated fluid in a marked and, perhaps, peculiar manner.† The interesting cases lately published by Dr.

* MEDICAL REPOSITORY for May, 1823.

† How far the vascular or the nervous systems suffer individually, or how far either may be exclusively affected, in accidents of this description, we have not data whereon to rest an opinion. If it be contended that neither is deranged otherwise than consecutively, where are we to seek the primary lesion? The absorbents may be disordered both in structure and in function by the local injury; but even allowing the greatest extent of injury of this system, which, indeed, the disorder does not present, still the cause is inadequate to the production of the morbid phenomena observed in its course. But the mass of fluids may be infected by the introduction of a morbid poison; and here we arrive where we must all hesitate—at a point of pathology, on which much confusion of opinion has existed, and still continues to exist. Indeed, speculation is exactly in the same state regarding it as it is respecting other animal poisons; and although we are far from denying it to be a poison, we cannot call it a morbid one, inasmuch as it proceeds not from any morbid virus, which we can point out as such and employ in that capacity, nor from previous or specific disease, as is the case with rabies, small-pox, &c. But, since it acts as a poison, it matters the less whether it be specific or not, the process by which it produces death, or the succession of phenomena which it induces, may be either similar or analogous to that which animal poisons observe. Here, therefore, in tracing the process of derangement induced in the system by occurrences of the kind under consideration, our knowledge is nearly of a kind respecting them, as it is with regard to any inoculated virus. But, viewing them as entirely similar as to their mode of operation, the question still remains undecided, whether a specific virus, or any other animal poison, produces its effects on the economy owing to its

COLLES*, as well as that alluded to in a contemporary journal†, seem to favour this conclusion.

The most important topic which has usually been connected with the pathology of the *muscular system* is that

influence on the blood, from its being received there unchanged, or on the nervous system of the part, and especially on the nerves of the vessels by which it is introduced into the circulation. That it operates through the medium of the blood, presupposes that it is carried into the blood unchanged, and that it is taken up immediately by the veins; for its absorption by the lymphatics would lead us to suppose that it might experience a change, assimilating it with the circulating fluid in the route through the absorbent apparatus. Supposing it, therefore, to arrive in the blood, possessing all its peculiarities, in what manner can we conceive it to change the state of this fluid? Have we any proof of such change? But the blood may be altered, and yet not sensibly so even by experiments, though perfectly so by its effects in the animal economy: still, granting that it is changed, (which cannot be allowed to its full extent in favour of any morbid virus,) it cannot act upon the system otherwise than through the medium of the vessels in which it circulates, which vessels are only impressed by means of the nerves which supply them. The introduction of any virus into an animal texture appears not, however, to act primarily on the blood, from various circumstances connected with the pathology of disorders which are perpetuated in this manner, and chiefly from the following considerations:—

1st, The blood does not inoculate or transmit a disorder, though the secretions do. 2d, A specific secretion can alone constitute a specific virus, and propagate its kind by inoculation. 3d, The secretions that transmit the disorder, and the specific poisons generated in the progress of certain diseases, do not exist in the blood previous to their secretion, being only carried out of the circulation by the secreting process; otherwise they would be most abundantly voided by the kidneys and other emunctories, and not generated in certain tissues. 4th, It follows, therefore, and general experience and observation confirm it, that morbid poisons are not generated in the blood while it circulates through the system, but *from* the blood, in consequence of the altered function of the capillaries changing the nature of the fluid passing through them, which alteration of function may have been induced either in the nerves supplying the capillaries of a part, as is the case in inoculation, and thence propagated throughout the system, or by an impression made simultaneously on a great portion of this class of nerves, as in contagion or infection: in the latter case the dilute secretion, on an extended surface, is equal in its effects to the concentrated virus, applied to a limited point, as in the former.

* Dublin Hospital Reports, Vol. III. p. 203.

† Medical and Physical Journal for February, 1823.

which relates to rheumatism. Respecting the intimate nature of this disorder we are still insufficiently enlightened, and it appears to us even doubtful how far the generally received opinions with regard to it are correct: we, therefore, readily attend to such facts as are calculated to advance our knowledge on the subject. The translation of this affection to the heart has become of so frequent occurrence, that it is no longer looked on as an unusual circumstance. We are constantly hearing of instances in which it has proved fatal, although it is not necessarily so; and, in a period comparatively short, and in the course of opportunities by no means very extensive, we have ourselves been consulted in three cases wherein this supervention of disease had taken place, as

To these many other proofs may be added against the idea that the blood undergoes the first change essential to the production of disease and of a morbid virus; and in support of the opinion that a morbid poison affects chiefly the nerves of the part to which it is applied, and particularly those distributed on the blood-vessels, that the blood, although it may be changed, especially in the course of disorder, is not exclusively or even primarily altered; and that, whatever changes it may undergo result chiefly from the morbid influence of the nervous system on the vessels in which it circulates, and on the organs which remove the effete matters from the circulation.

Were we to state our belief respecting the species of disorder inoculated from another body which has ceased to live, and as to the manner in which the inoculated fluid affects the system, from what we have heard of its effects, whether proceeding from the human subject or from a lower animal, we should be induced to conclude that it is produced from the animal textures before their vital properties are extinct; because putrid animal substances occasion different and less dangerous effects in the system: that as all morbid poisons possess certain properties bestowed on them by the vital or nervous influence of the vessels and parts secreting them, in consequence of previous disease either of these parts or of the general system, which influence they preserve for a time, until the materials composing them enter into different combinations and are consequently decomposed; so may the capillaries, producing the usual secretions of the system, occasionally experience, during the period in which the vital or nervous energy gradually forsakes them, that particular condition which, with the state of the blood existing in them, may allow a fluid to escape, which receives from the expiring influence certain properties, thus giving it the qualities of an animal poison: that this fluid, thus endowed, affects the nerves supplying the blood-vessels of the part in which it is inserted: that, consequently, first the nerves and vessels become deranged in their functions, and afterwards the whole system is disordered; while, with the general derangement, the nerves and vessels in the vicinity of the part inoculated still evince the severest disturbance.

was proved by their termination and by post mortem inspection*. Within the period to which we confine ourselves, a case of this description has been recorded by Mr. A. ARMSTRONG†. In this instance, and in all others that have come to our knowledge, the muscular texture of the heart presented fewer and less marked appearances of disease than its serous envelopes: indeed, rheumatic metastasis does not appear to attack the muscular parts of internal organs; the serous membrane seems to be the obnoxious tissue; and although those surrounding the heart frequently experience its invasions, no organ or viscus of the body, in which this structure exists, appears to be entirely exempt from it.

The frequent translation, or rather conversion of this disease to one of an internal texture, being so commonly observed in modern practice, it becomes a matter of importance to speculate respecting its cause, and to inquire how far the depleting and antiphlogistic plan of treatment, at present so generally employed, may contribute to its occurrence. This mode of practice in rheumatism has been entirely founded on generally received notions of its pathology, which have not undergone that strict investigation which might have been expected from the inquiring spirit of the age. It would be a subject of some interest to inquire how far the conclusion, that rheumatism is inflammation of a particular texture, is supported by pathological facts, or even by analogy. There are none, in our opinion, which can be adduced, except those which are derived from the appearance of the tissue affected in the cases in which conversion of disease has taken place, from the swelling and redness of the surface sometimes observed in other instances, and from the state of the fibrous and serous membranes, in protracted or severe cases of the disorder. These are not, however, satisfactory proofs that this affection is inflammation of the texture in which it is seated; for, in transferred disease, the subsequent ailment may be different, and it is so in many of its characters, from that which previously existed; and we can have no farther reason to conclude them both to be the same,

* On consulting our notes, we find that six cases have come under our notice within the space of four years. Five of these were distinctly of this description — one was doubtful. Of these two recovered, but presented, for a considerable time, slight symptoms referable to the heart. In these depletion had been employed, with the exception of one, in which violent hypocaustharsis was produced, which immediately arrested the external disease, and as quickly induced the fatal disorder of the heart.

† Medical and Physical Journal for March, 1823.

because the former disappeared on the supervention of the latter, than we have to infer that, because a blister removes a pain distinctly nervous, or any other affection unconnected with inflammation, therefore, this affection must have been inflammatory, otherwise inflammation of another part could not have removed it. The other proofs that have been noticed are still more weak, for we well know that the inflammatory appearances that have been observed in external parts or in joints, supervene only in the course of the disorder, and are, we contend, the consequences of the disease—are a morbid condition of the capillaries induced in them consecutively, owing to the primary derangement of the nerves of the part, and chiefly of these supplying those vessels; which morbid condition, though approaching in many of its characters to chronic or subacute inflammation, differs essentially in its nature from the phenomena, which taking place, in an idiopathic manner, in the capillaries of a part, constitute inflammation of that part. We cannot, at present, speculate farther on this subject, but leave it to the consideration of our readers, with the expectation of engaging in it again on a more legitimate occasion.

Proceeding next to the *second part* of our physiological arrangement, and viewing the *particular textures* in the order there pointed out, the interesting case of chronic inflammation of the peritoneum, published in this Journal by Mr. WARD, first claims our notice*. The attention which has been paid to pathological research in very recent times has shown that this is a species of derangement of more frequent occurrence than was formerly supposed; and it is not too much to believe that it was formerly confounded chiefly with colic, mesenteric affections, tumours of the omentum, &c. Indeed, it appears to us that the varieties of colic, which have been given in the history of cases and in systematic detail by many of the older pathologists, under the appellations of *arthritica*, *rheumatica*, *metastica*, *inflammatoria*, *symptomata*, *diuturna*, *chronica*, &c., were chronic inflammations of this membrane; and we believe that the disease may supervene in the manner indicated by those specific names. Since we endeavoured to draw attention to the frequency and importance of this disorder, and to illustrate its pathology†, several cases, more or less marked, have come under our observation.

The pathology of the *fibrous textures* has received very considerable elucidation from the researches of M. RAYER, in the excellent memoir to which we have before referred,

* MEDICAL REPOSITORY for April, 1823.

† Ibid. Vol. XV. p. 372.

especially as respects the inflammatory condition of these parts. Our limits, at present, prevent us from giving an account of his researches*. We shall take a future opportunity of submitting a review of them to our readers.

Adverting next to the *osseous texture*, the continuation of Dr. KNOX's† memoir on the regeneration of bone, the former part of which was referred to in our former sketch, deserves notice. This pathologist has concluded from his researches, that the manner in which new osseous matter shoots from old bone appears to be as follows:—"The vessels supplying the remaining healthy old bone, whether proceeding to it from the periosteum, surrounding soft parts, or otherwise, become increased in size, and perhaps in number; granulations arise on the surface, which, by degrees becoming firm, are afterwards converted into bone. These are found to shoot in various directions, but chiefly downwards and upwards in long bones, often separating widely from the surface of the dead bone, when not retained by careful bandaging. They occasionally stretch across, forming arches, and enclosing the dead portions of the original bone,—an appearance of frequent occurrence in compound fractures, by whatever cause occasioned. When arising from a fall or blow, sufficient to break, but not destroy the vitality of the bone, it is probable that compound fractures unite much in the same manner as simple ones. For as bones are slow in going through the various processes from health to disease, so the lacerated soft parts may suppurate and heal by granulations, whilst the bone will unite chiefly by what must be considered the first intention."

The manner in which the new bone acquires a periosteum is a matter of much interest and doubt. In the examination of some specimens Dr. Knox has observed a thin membrane covering the osseous granulations; but he knows of no facts to decide whence this membrane proceeds. "It is not unlikely that it is supplied by the cellular texture either of the new bone, or of the surrounding parts; and that in some instances it may be merely a prolongation of the old. New skin on ulcers does not always grow from the surrounding healthy edges; which fact may be applied to the formation of new periosteum."

But few objects of interest have lately presented themselves connected with the pathology of *glandular textures*. The frequent occurrence of disease in those internal viscera which possess a glandular structure, as the liver, spleen, and pan-

* Archives Gén. de Méd. Mars et Avr. 1823.

† Edinburgh Medical Journal for April, 1823.

creas, either after attacks of intermittent and remittent fevers, or after the prevalence of certain epidemics, has long been a matter of notoriety amongst observing Practitioners. Without instancing the more common cases and forms of these occurrences which have been recorded, we refer to an account given by Dr. LUCAS, of Virginia, of the character of the diseases which were the sequel of the fever which prevailed in that part of the United States during 1821*. The account also given by Dr. AGNEW of the epidemic which prevailed in some parts of Pennsylvania in 1819, 20, and 21†, still farther illustrates the sources whence disorder of this structure frequently originates. We refer, however, to the former of these articles, more on account of the facts which it contains, than of the manner in which they are detailed and illustrated. A review of the circumstances connected with the constitutional or local origin of diseases of the glandular texture fully evinces how very much, and even how entirely, they depend on the vital energies of the system and of the vessels of the part affected; whether the causes which produce them be previous ailment, certain states of the atmosphere and of the terrestrial exhalations, or the kind of ingesta.

The interesting case of organic disease of the liver observed by M. NACQUART‡ is already before the readers of this Journal. Several cases have come to our knowledge in which rupture of this viscus has occurred from external violence, and yet the patients have lived for several days, and betrayed no signs which were calculated to disclose the nature of the injury. The particulars of some of those occurrences we expect to detail in a future Number. Dr. HELLER has recorded a case in which the rupture of the liver was complicated with laceration of the diaphragm and dorsal muscles, yet the patient lived for some time after the accident||.

The intimate relation between derangement of the *mucous tissues*, particularly of the digestive canal, and those of the meninges of the brain, was formerly shown by numerous facts recorded by PROST; and M. BROUSSAIS so confidently regarded affections of the encephalon as a sympathetic effect of primary irritation of the villous surface of the digestive tube, that he made the connexion one of the fundamental principles of his system, and resorted to it in order to explain the cerebral symptoms and lesions, which were urged against his patho-

* American Medical Recorder, No. 21, p. 117.

† Ibid. p. 126.

‡ REPOSITORY for January, 1823.

|| Journal Général, Mars 1823.

logy of fever. M. SCOUTETTEN* has endeavoured to support the opinions in favour of this sympathetic relation, and has stated that the inspection of a great number of bodies has confirmed his belief, that a connexion between the state of the digestive canal and that of the arachnoid of the brain exists, in so direct a manner, that when the former is irritated, either in an acute or chronic manner, this membrane always participates in the same degree of irritation. In order to establish his opinion, M. S. commenced with ascertaining the state of the arachnoid in health. Having satisfied himself on this point, both by experiment and by observation; and having always observed that this membrane is perfectly transparent throughout its extent; that it presents no granulations, excepting on some parts of its surface; that it offers no sanguineous injection in any of its capillary vessels; and, finally, that no sanguineous exudation is found on its surface in its natural condition; he concludes that whenever it presents appearances different from these, and is neither pale, transparent, thin, nor without adhesions, it is then in a state of disease. He farther considers that it is only the *mucous tunic* of the stomach and intestines which exercises so direct a sympathetic irritation on the arachnoid.

M. Scoutetten has gone on to remark, that when the mucous membrane of the intestinal canal becomes inflamed in an acute manner, the arachnoid membrane of the cerebrum participates in the same degree of inflammation, and its vessels are injected; they form red patches on several points of its superior surface, and sometimes sanguineous exudations take place in a more or less abundant manner. All these alterations are partial, and are chiefly observed on the anterior lobes of the brain, and on the lateral parts of this organ when the irritation is not very acute; but when the inflammation of the intestinal canal is violent, nearly all the arachnoid is also inflamed, and presents a deep red colour, and is dry and glistening. Sometimes an albuminous exudation, which has a close resemblance to pus, forms between the two laminæ of this membrane. When the inflammation is violent, adhesions frequently take place between the two hemispheres; the prolongations of this membrane, which penetrate between the circumvolutions of the brain, are also red, injected, and often adhere with considerable tenacity.

When, however, the digestive tube is affected with chronic inflammation, the morbid appearances of the arachnoid are different. It then becomes slightly opaque; an infiltration of serosity takes place within its areolar tissue; its thickness appears singularly augmented, and it assumes a gelatinous

* Journal Universel, No. 84, p. 257.

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aspect. If a slight incision be made into it, the infiltrated fluid escapes, and the two laminæ collapse. In some cases of the chronic irritation, so considerable an accumulation of serosity takes place within the ventricles of the brain as to compress this organ against the bony parietes, and to arrest the infiltration between the meshes of the interlaminar tissue of the arachnoid. In this case the membrane appears dry, but it is always thickened and opaque. When the intestines present signs of chronic inflammation, which afterwards assumes an acute character, corresponding lesions take place in the arachnoid. This membrane is thickened, opaque, frequently gelatinous; moreover, it is red, its vessels are injected, and sometimes it is covered with a sanguineous exudation.

This remarkable coincidence of the existence of inflammation in the gastro-intestinal mucous surface, and in the arachnoid, according to M. Scoutetten, satisfactorily explains many important points of pathology hitherto obscure*, both as respects diseases of the meninges of the brain, and those of the brain itself, whether affecting the physical or mental manifestations.

We cannot leave the consideration of the pathology of the mucous surfaces without directing the attention of our readers to the very interesting and remarkable case of hæmorrhage from the internal surface of the ilium, detailed in our preceding Number by Mr. LLOYD, whose laudable attention to morbid research will, we expect, be the means of rendering farther services to pathological science.

The most interesting addition that has been made to the observations we already possess on the nature of derangements seated in the *dermoid structure*, has been furnished by Mr. E. THOMPSON. The case of pemphigus, which he has published in our preceding Number, is well calculated to advance our knowledge of the nature of this rare and imperfectly understood disorder.

A singular species of cutaneous disease, which we had not previously seen described by writers on this class of ailments, came under our observation some time since through the kindness of Mr. W. B. Painter, the very respectable Practitioner in Westminster. We took occasion soon afterwards to detail the particulars connected with it to the Medical Society. Since that time, this disease has been described by Dr. GUERSENT, in the MARCH Number of the Medical

* We can state that our experience fully confirms this connexion, in those diseases of children which affect the mucous surface of the digestive organs.

Archives for 1823; which has just reached us, under the name of atonic furunculus, — a name by no means appropriate, according to the meaning attached to the word furunculus in this country. As we intend to place before our readers the particulars of the two cases which came under our notice, with the appearances observed on dissection in one of them, we shall defer giving the accurate description of M. Guersent until then.

Proceeding in the next place to exhibit a view of the additions that have been made to our knowledge of the pathological states of *particular organs*, we shall first direct our attention to derangements of the *digestive canal*. Commencing this part of our subject with the consideration of derangements, which may be considered as chiefly functional — which present, at least, no very palpable lesion of structure — diabetes, according to our ideas of its nature, first arrests our attention. It may, perhaps, surprise our readers that we should remove a disease, which has been usually considered to have its seat in the kidneys, to the digestive organs. But we are induced to take this view of its nature, 1st, because the kidneys betray no signs of disorder on dissection that can, in any measure, contribute towards the explanation of its phenomena; and, 2dly, the various symptoms essential to and accompanying the disease cannot be explained after so confined a view of its pathology. Without, however, stating any farther reasons against referring diabetes to the kidneys, we may briefly state our belief that further research will show that it is a disease principally of the stomach, duodenum, and, perhaps, of the upper portion of the small intestine; that it is not inflammation of these parts; that it chiefly arises from increased activity of the capillary vessels on their internal surface, secreting the fluids requisite to digestion in greater quantity, and, perhaps, in an altered condition; that the lymphatic absorbents running into venous trunks, and the lacteal vessels, partake in this erythism; that these vessels experience this state from the greater activity or influence of the nerves supplying them and the internal surface of those particular viscera to which they are distributed; that owing to the erythism of these vessels, the functions of digestion and absorption are craving, — hence the desire of food and drink — and these operations are rapidly performed on the substances submitted to them; that, in consequence of this activity of function, — of the increased digestion and absorption which take place in the stomach, and of an imperfect admixture of the biliary and pancreatic secretions, owing to the great disproportion existing between them, and the increase of chyme furnished by the stomach,

a larger quantity of fluids and of imperfect chyle is conveyed into the circulation in an insufficiently, hastily, and morbidly digested state, which the energies of the other organs, from the circumstance of the vital powers being chiefly determined towards those of digestion, are incapable of assimilating in a complete and healthy manner; that owing to this replete state of the circulating fluid the kidneys have a larger quantity of those materials on which they are intended to act conveyed to them, which stimulate them to increased action; that the kidneys are no farther deranged, than that they have their functions excited by the unusual quantity of the aqueous, chylous, and insufficiently digested materials, which, circulating in the blood, are presented to them, and which, owing to this state, cannot be assimilated with the textures of the body, would be injurious to the system if they remained in the blood, and are removed from it by those organs whose uniform and natural function it is thus to remove them; and finally, that the materials conveyed so superabundantly into the circulation, as we have stated, and thus secreted from it by the natural action of the kidneys, constitute diabetic urine; and that the various phenomena, essential to and concomitant on the disease, are best explained by considering the digestive canal to be its chief seat, according to the brief view we have just given.

In support of these positions, we may adduce the fulness at the epigastrium, the sensation of internal heat and spasmodic constriction about the region of the stomach, and the frequent sense of gnawing felt in this viscus, &c. That the saccharine quality of the urine results from the properties of the chyle, and from the fluids so abundantly absorbed into the circulation, is shown by the more saccharine state of the urine discharged soon after a meal. Dr. ROLLO* observed, in a case related by him, that this secretion was insipid in the morning, saccharine after dinner, and natural in the evening, even after it was reduced to its natural quantity.

It may be contended against the pathology of this disease, which we have now sketched, that morbid appearances have not been observed in the stomach and intestines to account for the disorder referred to it; but it should be considered that organs which perform their functions merely in an increased degree generally present but few lesions cognizable

* Since the above was written, we find, on referring again to Dr. Rollo, that he entertained nearly similar opinions to ourselves respecting the nature of this disease. His physiology, however, was deficient, for he had not the advantage of the recent researches regarding absorption, which tend, in an essential manner, to support this view of the disease.

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creas, either after attacks of intermittent and remittent fevers, or after the prevalence of certain epidemics, has long been a matter of notoriety amongst observing Practitioners. Without instancing the more common cases and forms of these occurrences which have been recorded, we refer to an account given by Dr. LUCAS, of Virginia, of the character of the diseases which were the sequel of the fever which prevailed in that part of the United States during 1821*. The account also given by Dr. AGNEW of the epidemic which prevailed in some parts of Pennsylvania in 1819, 20, and 21†, still farther illustrates the sources whence disorder of this structure frequently originates. We refer, however, to the former of these articles, more on account of the facts which it contains, than of the manner in which they are detailed and illustrated. A review of the circumstances connected with the constitutional or local origin of diseases of the glandular texture fully evinces how very much, and even how entirely, they depend on the vital energies of the system and of the vessels of the part affected; whether the causes which produce them be previous ailment, certain states of the atmosphere and of the terrestrial exhalations, or the kind of ingesta.

The interesting case of organic disease of the liver observed by M. NACQUART‡ is already before the readers of this Journal. Several cases have come to our knowledge in which rupture of this viscus has occurred from external violence, and yet the patients have lived for several days, and betrayed no signs which were calculated to disclose the nature of the injury. The particulars of some of those occurrences we expect to detail in a future Number. Dr. HELLER has recorded a case in which the rupture of the liver was complicated with laceration of the diaphragm and dorsal muscles, yet the patient lived for some time after the accident||.

The intimate relation between derangement of the *mucous tissues*, particularly of the digestive canal, and those of the meninges of the brain, was formerly shown by numerous facts recorded by PROST; and M. BROUSSAIS so confidently regarded affections of the encephalon as a sympathetic effect of primary irritation of the villous surface of the digestive tube, that he made the connexion one of the fundamental principles of his system, and resorted to it in order to explain the cerebral symptoms and lesions, which were urged against his patho-

* American Medical Recorder, No. 21, p. 117.

† Ibid. p. 126.

‡ REPOSITORY for January, 1823.

|| Journal Général, Mars 1823.

logy of fever. M. SCOUTETTEN* has endeavoured to support the opinions in favour of this sympathetic relation, and has stated that the inspection of a great number of bodies has confirmed his belief, that a connexion between the state of the digestive canal and that of the arachnoid of the brain exists, in so direct a manner, that when the former is irritated, either in an acute or chronic manner, this membrane always participates in the same degree of irritation. In order to establish his opinion, M. S. commenced with ascertaining the state of the arachnoid in health. Having satisfied himself on this point, both by experiment and by observation; and having always observed that this membrane is perfectly transparent throughout its extent; that it presents no granulations, excepting on some parts of its surface; that it offers no sanguineous injection in any of its capillary vessels; and, finally, that no sanguineous exudation is found on its surface in its natural condition; he concludes that whenever it presents appearances different from these, and is neither pale, transparent, thin, nor without adhesions, it is then in a state of disease. He farther considers that it is only the *mucous tunic* of the stomach and intestines which exercises so direct a sympathetic irritation on the arachnoid.

M. Scoutetten has gone on to remark, that when the mucous membrane of the intestinal canal becomes inflamed in an acute manner, the arachnoid membrane of the cerebrum participates in the same degree of inflammation, and its vessels are injected; they form red patches on several points of its superior surface, and sometimes sanguineous exudations take place in a more or less abundant manner. All these alterations are partial, and are chiefly observed on the anterior lobes of the brain, and on the lateral parts of this organ when the irritation is not very acute; but when the inflammation of the intestinal canal is violent, nearly all the arachnoid is also inflamed, and presents a deep red colour, and is dry and glistening. Sometimes an albuminous exudation, which has a close resemblance to pus, forms between the two laminae of this membrane. When the inflammation is violent, adhesions frequently take place between the two hemispheres; the prolongations of this membrane, which penetrate between the circumvolutions of the brain, are also red, injected, and often adhere with considerable tenacity.

When, however, the digestive tube is affected with chronic inflammation, the morbid appearances of the arachnoid are different. It then becomes slightly opaque; an infiltration of serosity takes place within its areolar tissue; its thickness appears singularly augmented, and it assumes a gelatinous

* Journal Universel, No. 84, p. 257.

aspect. If a slight incision be made into it, the infiltrated fluid escapes, and the two laminæ collapse. In some cases of the chronic irritation, so considerable an accumulation of serosity takes place within the ventricles of the brain as to compress this organ against the bony parietes, and to arrest the infiltration between the meshes of the interlaminar tissue of the arachnoid. In this case the membrane appears dry, but it is always thickened and opaque. When the intestines present signs of chronic inflammation, which afterwards assumes an acute character, corresponding lesions take place in the arachnoid. This membrane is thickened, opaque, frequently gelatinous; moreover, it is red, its vessels are injected, and sometimes it is covered with a sanguineous exudation.

This remarkable coincidence of the existence of inflammation in the gastro-intestinal mucous surface, and in the arachnoid, according to M. Scoutetten, satisfactorily explains many important points of pathology hitherto obscure*, both as respects diseases of the meninges of the brain, and those of the brain itself, whether affecting the physical or mental manifestations.

We cannot leave the consideration of the pathology of the mucous surfaces without directing the attention of our readers to the very interesting and remarkable case of hæmorrhage from the internal surface of the ilium, detailed in our preceding Number by Mr. LLOYD, whose laudable attention to morbid research will, we expect, be the means of rendering farther services to pathological science.

The most interesting addition that has been made to the observations we already possess on the nature of derangements seated in the *dermoid structure*, has been furnished by Mr. E. THOMPSON. The case of pemphigus, which he has published in our preceding Number, is well calculated to advance our knowledge of the nature of this rare and imperfectly understood disorder.

A singular species of cutaneous disease, which we had not previously seen described by writers on this class of ailments, came under our observation some time since through the kindness of Mr. W. B. Painter, the very respectable Practitioner in Westminster. We took occasion soon afterwards to detail the particulars connected with it to the Medical Society. Since that time, this disease has been described by Dr. GUERSENT, in the MARCH Number of the Medical

* We can state that our experience fully confirms this connexion, in those diseases of children which affect the mucous surface of the digestive organs.

Archives for 1823; which has just reached us, under the name of atonic furunculus, — a name by no means appropriate, according to the meaning attached to the word furunculus in this country. As we intend to place before our readers the particulars of the two cases which came under our notice, with the appearances observed on dissection in one of them, we shall defer giving the accurate description of M. Guersent until then.

Proceeding in the next place to exhibit a view of the additions that have been made to our knowledge of the pathological states of *particular organs*, we shall first direct our attention to derangements of the *digestive canal*. Commencing this part of our subject with the consideration of derangements, which may be considered as chiefly functional — which present, at least, no very palpable lesion of structure — diabetes, according to our ideas of its nature, first arrests our attention. It may, perhaps, surprise our readers that we should remove a disease, which has been usually considered to have its seat in the kidneys, to the digestive organs. But we are induced to take this view of its nature, 1st, because the kidneys betray no signs of disorder on dissection that can, in any measure, contribute towards the explanation of its phenomena; and, 2dly, the various symptoms essential to and accompanying the disease cannot be explained after so confined a view of its pathology. Without, however, stating any farther reasons against referring diabetes to the kidneys, we may briefly state our belief that further research will show that it is a disease principally of the stomach, duodenum, and, perhaps, of the upper portion of the small intestine; that it is not inflammation of these parts; that it chiefly arises from increased activity of the capillary vessels on their internal surface, secreting the fluids requisite to digestion in greater quantity, and, perhaps, in an altered condition; that the lymphatic absorbents running into venous trunks, and the lacteal vessels, partake in this erythism; that these vessels experience this state from the greater activity or influence of the nerves supplying them and the internal surface of those particular viscera to which they are distributed; that owing to the erythism of these vessels, the functions of digestion and absorption are craving, — hence the desire of food and drink — and these operations are rapidly performed on the substances submitted to them; that, in consequence of this activity of function, — of the increased digestion and absorption which take place in the stomach, and of an imperfect admixture of the biliary and pancreatic secretions, owing to the great disproportion existing between them, and the increase of chyme furnished by the stomach,

a larger quantity of fluids and of imperfect chyle is conveyed into the circulation in an insufficiently, hastily, and morbidly digested state, which the energies of the other organs, from the circumstance of the vital powers being chiefly determined towards those of digestion, are incapable of assimilating in a complete and healthy manner; that owing to this replete state of the circulating fluid the kidneys have a larger quantity of those materials on which they are intended to act conveyed to them, which stimulate them to increased action; that the kidneys are no farther deranged, than that they have their functions excited by the unusual quantity of the aqueous, chylous, and insufficiently digested materials, which, circulating in the blood, are presented to them, and which, owing to this state, cannot be assimilated with the textures of the body, would be injurious to the system if they remained in the blood, and are removed from it by those organs whose uniform and natural function it is thus to remove them; and finally, that the materials conveyed so superabundantly into the circulation, as we have stated, and thus secreted from it by the natural action of the kidneys, constitute diabetic urine; and that the various phenomena, essential to and concomitant on the disease, are best explained by considering the digestive canal to be its chief seat, according to the brief view we have just given.

In support of these positions, we may adduce the fulness at the epigastrium, the sensation of internal heat and spasmodic constriction about the region of the stomach, and the frequent sense of gnawing felt in this viscus, &c. That the saccharine quality of the urine results from the properties of the chyle, and from the fluids so abundantly absorbed into the circulation, is shown by the more saccharine state of the urine discharged soon after a meal. Dr. ROLLO* observed, in a case related by him, that this secretion was insipid in the morning, saccharine after dinner, and natural in the evening, even after it was reduced to its natural quantity.

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fourth part of Professor LALLEMAND's * work; those which generally terminate in inflammation of the internal part of this organ, and occasionally extend to the brain and its membranes, have been the chief objects of his research.

But few additions have lately been made to our knowledge of the pathology of the *urinary and generative organs*. The works of Mr. HOWSHIP and Mr. BINGHAM on the diseases of the urinary organs have been so fully reviewed in our preceding Numbers, that we have only to assign them the proper rank which they deserve to hold in the pathological history of the period under consideration. The production of the former gentleman is undoubtedly the result of some considerable extent of observation, although it would appear, from the frequent reference made to the experience of Mr. HEAVISIDE, that Mr. Howship† has received no inconsiderable share of his materials from that experienced Surgeon. For reasons that are obvious in the subjoined note, we do not consider Mr. H.'s late work as so legitimately falling within the intention of the present sketch, that it requires any farther notice. Mr. Bingham's volume on the diseases of the bladder was so fully analyzed on a former occasion,‡ as to render it unnecessary to say more respecting its merits than to repeat what we then said, that, although it contains but few additions to our information on the subjects which it embraces, yet it forms a useful work to several Practitioners, inasmuch as it lays before them in a single volume what was previously scattered through the pages of many.

Particular and even solitary observations are frequently calculated to promote our views respecting the disorders to

* *Recherches Anatomico-Pathologiques sur l'Encéphale et ses Dependances, &c.* Paris, 1823.

† There is one point which escaped our observation at the time when we reviewed this work, and respecting which, we conceive, Mr. Howship has not acted with strict propriety. We refer to the silence he has uniformly kept with regard to his former work, entitled "*Practical Observations on the Diseases of the Urinary Organs, particularly those of the Bladder, the Prostate Gland, and Urethra, 8vo. 1816,*" and to the manner in which he has presented his present work, which is in many respects only a new and extended edition of the former, to the Profession as an original production, under the altered title of "*A Practical Treatise on the Symptoms, Causes, Discrimination, and Treatment of some of the most important Complaints that affect the Secretion and Excretion of the Urine, &c. &c.*" We leave the Profession to judge how far they have been properly treated in this matter: it is our duty to remark the circumstance, and to inform our readers respecting it, since Mr. H. has failed in this part of his unquestionable duty.

‡ *REPOSITORY* for February, 1823.

which they relate; the interesting case of nephritis published by Dr. BROWN* is of this description. In it little or no pain, fever, or other symptoms, except the appearance of the blood drawn, were present, which could lead to the belief that derangements so extensive as that which dissection detected, were present in the urinary organs during life. This case was chiefly characterized by complete suppression of urine, and subsequent coma. On dissection, very considerable effusion was remarked on the surface of the brain, and but little within the ventricles. The substance of the kidneys was much inflamed and injected, their pelvic cavities thickened and ulcerated, and a calculus about the size of, and resembling, a small kidney bean, was impacted in each ureter; the ureters were not dilated above the part where the calculi were lodged.

The pathology of the *generative organs* has presented us with some remarkable facts. Respecting these, we have only to refer to our preceding Number. The singularly complicated case of ovarian fœtation there recorded by Mr. W. B. PAINTER, and the full and perspicuous details with which he has furnished us respecting it, cannot fail of interesting the Profession, and, indeed, all who speculate on the operations of the animal economy. The points of particular interest in this remarkable case are, the morbid lesions which had evidently so long existed in the uterus, the situation of the child within the covering of the ovary, the impermeable state of the Fallopian tubes, and the circumstances connected with the previous history and last illness of the patient. These facts would seem to prove that impregnation actually does take place, although the route by which the seminal fluid is commonly supposed to reach the ovum is completely obstructed; for even granting that the tubes were not obstructed at the time of impregnation, still the membranes of the ovary were interposed, in this case, between the ovum and whatever might be propagated to the ovary along these tubes. In order, therefore, to explain the phenomenon, we must have recourse to the opinion in support of the transfer of the semen from the vagina directly to the ovary by means of lateral absorption. The facts which this case also discloses respecting the effects of slow inflammation on the substance of the uterus likewise deserve attention. The very singular case of fatal hæmorrhage from the Fallopian tube by M. GODELLE† requires particular notice at this place: to account for its occurrence is apparently beyond the present state of our knowledge.

* Edinburgh Medical Journal for April, 1826.

† REPOSITORY for June, 1823.

Having sketched the additions which have been made to the pathology of the general systems, and particular textures and organs, we now proceed, in the same synthetical mode of inquiry, to consider the views which have been lately offered respecting those derangements which appear to influence the body in a general manner, and to disorder the functions of all the grand systems and organs of which it is constituted, although some particular textures may suffer in some of them in an especial manner. Commencing, therefore, this view with the opinions which relate to the etiology and pathology of idiopathic fever, one of the most interesting works which have lately appeared on this subject, and, indeed, the only one that has been published on it in this country, is the account given by Dr. O'HALLORAN of the epidemic which recently ravaged Barcelona. In addition to the view which we gave in our former Number of his opinions respecting the origin and nature of this fever, the information which he has furnished respecting the state of the weather, and of the diseases which prevailed previous to the appearance of that destructive malady, deserves to be recorded. Dr. O'Halloran has stated, that "about the termination of the foregoing month and beginning of May sudden deaths were numerous: they were attributed to the state of the weather. Comatose affections seized upon persons of all ages; and, when life was not suddenly destroyed, paralytic affections were invariably the consequences.

"The heat was considerable in the month of June. Colics, diarrhoeas, and dysenteries prevailed, and affected all classes, but particularly the young. The bilious remittent, or gastric fever, was common during this month, and ultimately predominated in so high a degree, as in a manner to supersede all other diseases.

"During the month of July, the weather was very changeable. The mornings were cold, the evenings hot, oppressive, cloudy, and damp. About the middle of July, several cases of jaundice appeared among the people. The caterpillars, which in other years strip the large trees which ornament the square of the general hospital and public walk, were suddenly killed, as if by lightning. In this month the ordinary diseases of the season were rarely observed, viz. cholera and inflammatory fever. The bilious remittent, with hæmorrhagic affection, was common and obstinate. It is worthy of remark, that, during this month, the flies and musquetoos were infinitely multiplied.

"The occurrences which preceded the appearance of the epidemic of Barcelona, in 1821, correspond with the old and recent observations on a similar subject in other countries; it

almost invariably happening, that the yellow fever of Spain is preceded by unusual diseases of various form and force; more particularly by bilious remittents, which are not unfrequently so aggravated and malignant, that Physicians themselves do not venture to define the line of demarcation between them and the avowed epidemic."

A letter which Dr. O'Halloran received from a Physician to one of the hospitals in Barcelona, has furnished very strong proof of the nature and non-contagious property of this epidemic, with the following account of the appearances on dissection:—"The liver," that gentleman has informed us, "presented a saffron colour, sometimes with obscure stains in its concave part, and almost always some gangrenous stripes in the gall bladder, with some portion of black bile. The mucous membrane of the stomach was inflamed, and the bottom of it contained a great portion of black liquor. Part of the intestines, and in particular the jejunum, contained the same humour; and there were bodies which contained more than three pounds of the same black liquor.

"In the spleen and kidneys no particular alteration was observable; but the urine in almost all the cases was very much of the colour of saffron. In many cases, adhesion of the lungs to the pleura were met with. Nothing particular was observed in the heart, nor in its large vessels: the liquor pericardii was always of a straw colour.

"Out of thirty persons of all descriptions, who were destined to assist the sick, not one took the disorder. The nurses continually communicated with the sick. When delirious patients escaped from their beds, the assistants had to take them on their shoulders, and replace them in their respective quarters. On the opening of the bodies, the anatomists, in my presence, involuntarily cut their fingers and hands, and not one was inoculated with the yellow fever. When the grave-diggers carried the dead bodies to the churchyard, they had to handle them a great deal before throwing them into the pit, and not one suffered in his health. In short, not an individual employed in the lazaretto either took the disorder, or was infected by those who were sick of the yellow fever."

The circumstances contemporary with the epidemic of Barcelona, the advantages which were taken of that destructive malady by the French government, and the object of the medical commission which proceeded to examine its nature, have been long apparent. These commissioners proceeded according to their instructions, and reported on the disease accordingly. However, when their report was made, and the political ends accomplished, to the effecting of which

they were amongst the hired and humble instruments, we should have supposed that there their vocation, as the puppets of the minister, would have ceased. And it did cease on the part of some of them. Others considered that it was requisite, on their parts, to preserve the appearance of sincerity; and although silence might have ensured them a continuance of their yearly *pension*, yet they conceived that their reward would be less likely to be forfeited by persevering in the cause which they had undertaken, and by answering those who impugned the accuracy of their report—we will not say of their opinions. Accordingly we have had constant visitations from the abettors of opposite doctrines respecting the origin of this fever, even within the period whose medical history we are now sketching. Of these M. AUDOUARD has been one of the most voluminous* and the most circumstantial in his details. He has reasoned in behalf of the foreign origin of the disease, and of its contagious nature, in the usual way; and he has given a novel but fanciful explanation of the manner in which the contagious principle is generated in its progress. He has not considered the disorder to consist in inflammation of the internal gastrointestinal surface, but in a particular derangement of its vitality, which he has not explained, allowing a sanguineous exhalation to escape into the cavity of the stomach. This exhalation he has viewed as the proximate cause of the subsequent derangements that characterize the disorder, owing to the changes which he has conceived it to undergo after its extravasation, and which may be compared to a species of fermentation. In the opinion of M. A., an engorged and congested state of the mucous membrane of the stomach and intestines takes place on the invasion of yellow fever, which is relieved by the effusion into the cavity of these viscera. This effusion or exhalation, owing to its effects on the system, produces the second stage; and the blood, thus extravasated, undergoes certain changes, consisting of the separation of its elastic or gaseous elements, which give rise to eructations, and which escape in this manner from the stomach and intestines. The volatile elements of the effused blood combine, according to M. Audouard, into a peculiar compound of a gaseous form which constitutes the essential and reproductive cause of the disease—the contagious principle by which it is propagated, and which can only produce the

* *Relation Historique et Médicale de la Fièvre Jaune qui a régné en 1821, à Barcelone*, par M. F. M. Andouard, D. M. M. envoyé à Barcelone par S. Ex. le Ministre de la Guerre, 8vo. pp. 540. Paris, 1822.

malady in others by acting on the mucous surface of the digestive canal. The black matter which is left behind in the stomach and intestines is a mere *caput mortuum*, unendowed with any infectious property, and constituting the matters which are ejected in the last stage of the malady. Such is the nature and cause of yellow fever in the opinion of this writer; how far it is well founded, it is neither necessary nor convenient at present to inquire.

The inferences which MM. BONNEAU and SULPICY have drawn from their researches on the contagion of yellow fever have been shortly noticed in a former Number*; and the arguments of Dr. MACLEAN in favour of the modern origin of opinions respecting contagion are before our readers†.

The effects of local or endemic causes in the production of fever have been always recognized, although many particulars, connected both with the nature of those causes and with the effects they produce on the animal economy, have not received that elucidation which the state of our knowledge on these topics requires; indeed, the difficulties attendant on this species of research are sufficiently evident, whether we regard the nature of the products which emanate from such sources, or the mode of operation they observe in producing their effects on the animal system. Connected with this subject, we have perused with satisfaction the description which M. DUPRÉ‡ has given of the sources of the febrile disease which destroyed about a sixth part of the inhabitants of the commune of Villechétive, in the department of the Yonne. This commune is environed by the forest of Othe, which furnishes abundant materials of humidity and of vegetable decomposition. The houses are generally separated from each other by deep excavations into the soil, which become the receptacles of rain-water, of vegetable putrefaction, and of other putrid matters, arising from the dwellings of the lower classes, and from the washing of their linen. In this commune also the dunghills are placed in the midst of putrid water at the very doors of the houses; and this state of humidity is preserved in order to promote the decomposition of the straw mixed with the ordure of the cattle. During the warm summer and autumn of 1822 those reservoirs formed in the excavated soil were dried up, and presented a thick covering of miry slime, which, when warmed by the power of the sun at that season, gave out an

* REPOSITORY for May, 1823.

† Ibid. for February and March, 1823.

‡ Journal de Physiologie, Janv. 1823.

odour which was insupportable, even at a considerable distance from its source. Heavy rains fell during July, and the inhabitants, who had been deprived of a requisite supply of water for six weeks, now used that which had accumulated in the excavations, although it was in small quantity, and presented a greenish colour. This scanty supply of foetid and putrid water, holding in solution the slimy and deleterious matters accumulated in those pits, was their only supply during July, August, and September.

Early in July the effects of those sources of disease, the miasmal exhalations and the internal use of stagnant and foul water, became evident. Young children were the first victims. They were affected with a mucous flux, without pain or abdominal tumefaction, and with an almost continued sinking of the vital forces, interrupted only by occasional evening exacerbations of fever. The pulse was uninterruptedly quick from the commencement of ailment, but the other febrile symptoms were slight. The stools became foetid, dark, and sometimes nearly black. The tongue and teeth were covered by a thick and dark coat; and the perspiration was copious and foetid. Most of the children affected by the disease died on about the thirteenth or fourteenth day, in a state of complete exhaustion, which frequently proceeded without interruption from the commencement of indisposition.

It was not until the beginning of August that the disorder was fully pronounced amongst adults; but in the space of three weeks it existed in every family, and before the month of December it had spared but a few of the inhabitants. Disease commenced with several days of general ailment, to which afterwards became added loss of appetite and frontal cephalalgia. To this generally succeeded violent fever, with a sense of weight at the epigastrium, a hard, full, but slow pulse, and occasionally vomitings of a tenacious and greenish matter. The tongue and mouth were foul and clammy. This state continued for some days, with evening exacerbations, difficult respiration, and frequent cough with mucous expectoration. To this supervened a copious mucous diarrhoea, with colicky pains, and an abundant generation of intestinal gas. Sometimes aphthæ appeared in the mouth, palate, and pharynx. The pulse became weak, perspiration abundant and continued, and the thirst extreme. These symptoms continued until the eighth or ninth day, when all the evacuations assumed a foetid and putrid character: about the eleventh day the prostration of the vital energies was extreme; the evacuations were black, and often involuntary; the perspiration abundant, cold, and acrid; and voluntary motion nearly extinct. After this period the cough

ceased, the pulse became small and compressible, aphthæ in the mouth appeared gangrenous, the perspiration was intolerably fœtid, the evacuations blacker and involuntary, &c. Death generally occurred on the 17th or 21st day. When recovery took place, the patient was frequently subject to the return of obstinate diarrhœa or spasmodic vomiting.

The state of the seasons is always most intimately connected with the origin of febrile diseases. Relating to this subject, Mr. H. EDMONDSTON has given an account of the weather, with reference to the diseases most prevalent in Newcastle-upon-Tyne*. From Mr. E.'s observations it is apparent, that fever possessing enteric and dysenteric characters, as well as pure cholera and dysentery, were unusually prevalent in that town, in consequence of the heavy falls of rain which took place in August after two months of uncommonly dry and warm weather.

That certain constitutions of the atmosphere give rise to particular characters in the epidemics which result from them, is a fact which has been frequently observed; for it can be only to that cause, in connexion with the terrestrial exhalations issuing from the seat of disease, that we can attribute an effect of so general a nature as that which respects a particular feature in a prevailing epidemic. The circumstances of the patients may have some influence in its production; but as the particular circumstances of individuals composing a community must differ in many respects, so the resulting effects cannot possess the uniformity which fevers often present. To such causes, therefore, as we can either manifestly trace, or to those whose operations we may consider of the most predominant and general kind, although we cannot demonstrate their nature, we must refer the leading characters of the various epidemics which have been observed in modern times. The strict attention that is now paid to all disorders which prevail in an unusually general manner, leave little information to be desired respecting their nature; and however much we may be at a loss to recognize their causes, we are generally made well acquainted with the phenomena they present in their course. Within the period to which our historical view is limited several accounts have appeared, describing fevers that have assumed more or less of an epidemic character in various parts of France during the two preceding years. These have generally possessed peculiar features; and the internal surface of the digestive canal, the lungs, and the skin, have been more frequently the seat of the greatest derangement.

At the time when Barcelona was the prey of the malady

* Edinburgh Medical Journal for April, 1823.

which destroyed nearly seven thousand of its inhabitants, the departments of the Oise, and of the Seine and Oise, in France, became the seat of a disease which occasioned some anxiety in the neighbouring capital. This epidemic has been described by MM. FRANÇOIS* and DUBUNDE-PÉYROLONGUE, and more recently, and in a much fuller and abler manner, by M. RAYER.† The last named of these authors has entered minutely into the topographical description of the districts which chiefly experienced the disease. From the account which he has given, it appears that this part of the country, formerly the province of Picardy, is moist, marshy, unequal in its surface, plentifully watered, and thickly wooded—circumstances which evince the abundant existence of the sources of disease. M. Rayer has farther informed us that epizooties‡ have been frequent in this department, and that epidemics have often manifested themselves, and have presented characters similar to the one which he observed.

The disorder generally commenced with symptoms of general ailment, to which abundant sweats supervened, which continued until the termination in convalescence, or in death. Towards the third or fourth day an eruption generally appeared on the skin, which was developed more or less rapidly, whether it was general or partial, discrete or confluent. M. Rayer has distinguished three varieties of eruption which it presented, and designated by the terms red, white, and phlyctenous miliaria. This exantheme terminated in the course of a few days by the eruption of the vesicles, or rather by a desquamation of the cuticle. On dissection, the disease presented more or less evident marks of inflammation of the mucous surface of the stomach and intestines; injection of the brain, or of its membranes; effusions of serum into the ventricles of the cerebrum; and inflammatory appearances in the lungs.

The history which M. Rayer has given of this epidemic is one of the best specimens of this department of medical literature which we have to record. The learning, research, and scientific knowledge which he has evinced, will ensure for him the esteem of his profession, and for his work an honourable reference, whenever the nature of epidemic fever is made the subject of inquiry.§

* Journ. Gén. de Méd. vols. 77 and 80.

† See Bibliography, REPOSITORY for April, 1823.

‡ The prevailing diseases of the lower animals form an excellent illustration of the causes and nature of those of our own species—an illustration too often neglected in descriptions of epidemic diseases.

§ With respect to the proximate cause of this fever, M. Rayer

An instructive memoir has been presented to the Medical Society of Paris, and subsequently published by M. HENNEQUIN,* describing the fever which prevailed in the autumn of 1822 in certain districts of the department of the Ardennes. M. H. has given a brief but excellent description of the disease, which he has attributed to the warmth of the summer succeeding heavy falls of rain in the winter and spring. This condition of the seasons, superadded to the natural humidity of the country, gave rise to a more than usually moist, warm, and close state of the atmosphere, which M. H. has considered as the chief cause of the disease, acting in conjunction with the particular circumstances of those affected.

After precursory symptoms of general ailment, which continued for several days, and which could not be assigned to any particular organ or texture, thus furnishing a demonstrative argument against the opinion that all fevers arise from a local affection, the more violent phenomena of the disease generally presented themselves. These were chiefly characterized by the adynamic state of the system generally, the irregular and low state of vascular reaction, and the atonic condition of the mucous surfaces. From the last named characteristic of the disorder, M. Hennequin gave it the name of muco-gastric fever. It presented no decided appearances of a contagious nature. It never terminated before the fourteenth day, and was sometimes prolonged to the fifth or sixth week. In general, convalescence was tedious; and, notwithstanding the severity of the symptoms and length of the disorder, fatal instances seldom occurred: M. H. found only *one* fatal case in about 150 patients affected with the disease in the village of Wasigny. Its termination was frequently marked by spontaneous hæmorrhages from the nose or anus, by copious vomiting, by a mucous diarrhœa, and by sweats possessing an acid odour. It appeared to run into no local affection of the internal organs.

We have been farther indebted to M. Hennequin† for a good description of a fever which manifested itself at Leffincourt, a village in the district of Vouziers, and in the department of the Ardennes. This disease appeared early in June; and although the village contained only two hundred and eighty inhabitants, during the first days of that month forty-six individuals were attacked, and seven fell victims to its severity. Although the manner of its appearance evinced an

appears to have adopted an opinion similar to that which our readers may observe to have been stated by ourselves, in the Number of the REPOSITORY for May, 1822, at pp. 376 and 377.

* Journ. Gén. de Méd. Décembre, 1822.

† Ibid. p. 352.

epidemic tendency, still there were circumstances connected with its progress that might have led some to a belief in its infectious properties. M. Hennequin, however, who was commissioned by the Prefect to examine into its nature, has decided that it was non-contagious, and considered it to have possessed, for its predisposing causes, the particular circumstances of the individual affected, combined with those determining influences exerted by the great heat and moisture of spring and summer. The principal characteristics of the fever were those of a gastric and cerebral kind. Vascular reaction was generally evident and well-marked, and the animal heat greatly increased: remissions were evident in its course. In several cases, however, the prostration of the energies of the system was continued throughout the disease; and the vascular action was depressed, or irregularly and imperfectly developed.

The general view which Professor FODERÉ * has taken of the causes of epidemic diseases, in the published volume of the work which he is at present preparing on this class of maladies, and on public health, is one of the most important accessions which medical science has acquired, and is calculated to enlighten both medical men and political economists as to the origin and progress of this fertile source of human misery. As we propose to analyze the work, as soon as it is completed, we will not now take a view of the topics which are discussed in the first volume.

Having now made as full a reference as our confined limits will permit to the most interesting facts which have lately come to our knowledge respecting the exciting causes of, and the phenomena presented by endemic and epidemic fevers, we should be more competent to enter on the delineation of those opinions which have been advanced respecting their intimate pathology or nature; because, viewing those opinions in relation to, and, indeed, on the basis of the observations regarding fever, which have been made, as we have just seen, in different climates, different situations, and in different kinds of that disease, whether sporadic, endemic, epidemic, or contagious, we have facts before us, whereby to test their validity, and to lead to their adoption or rejection; but, although those inducements are sufficient to entice us to inquire, after this manner, into the grounds of the opinions which have been hazarded on the nature of fever, during the period to which we confine our historical sketch, there are many circumstances which oblige us to defer the inquiry,

* See Foreign Bibliography, in *REPOSITORY* for March, 1823.

and not the least urgent of these is the intention of entering on the subject on a more appropriate occasion. It therefore only remains for us briefly to introduce to the notice of our readers those productions which have appeared on this topic.

One of the most voluminous writers whom we have to notice, at this place, is M. GENDRIN.* This Physician has gone back to many of the doctrines espoused by the older pathologists, and has referred several of the manifestations of particular organs, and of the system generally, to something like a peculiar intelligence which is seated in the textures and superintends their actions—an intelligent principle which tends incessantly to restore the equilibrium of the functions. Such was the opinion of VAN-HELMONT and STAHL, and of others from their times, down to that of JOHN HUNTER and his followers, who too frequently resorted to supposititious intelligences and endowments, in order to explain those operations of the animal economy which they could not otherwise understand; as if the feigning of properties, of which they had neither knowledge, experience, nor proof, could in anywise tend to satisfy inquirers, or advance the state of science as to these matters.

M. Gendrin has divided fevers into two classes—nervous and vascular fevers. Under the former class he has arranged intermittents, slow fevers, and nervous, phrenitic, adynamic, and ataxic fevers. The latter embraces exanthematous, inflammatory, hectic, hæmorrhagic, bilious, gastric, mucous, catarrhal, and putrid fevers. In his explanation of the nervous class of fevers there is much obscurity; and here he has had recourse to two principles, which he has introduced amongst those usually attributed to the animal system, namely, spontaneous exhaustion and spontaneous excitement; the alteration of which forces constitutes, in his opinion, intermittents: and as he conceives that all the systems and textures of the body are endowed with these two properties, so he imagines that the various types that this kind of fever assumes, as well as those derangements to which particular organs and tissues are liable, arise from the alteration of this property in such structures. Thus, he considers that when the derangement of properties takes place in a more particular manner in the nervous or in the vascular system, intermittents are accordingly nervous or inflammatory; if they act exclusively on one of these systems, the phenomena are limited in like manner; if on the excretory system, the intermittent presents a character according to the part of that system which is affected;

* *Recherches sur la Nature, et les Causes Prochaines de Fièvres.*
Par A. N. Gendrin, D.M. Deux volumes in 8vo. Paris, 1823.

and if they be deranged in a single organ, congestions, irritations, &c. of an intermittent type, are the result. Our readers may perceive in these principles a modification of the doctrine of Brown—a dead and mangled member of that system, without the genius that informed it.

The phenomena of some of the fevers which he attributes to the vascular system are explained conformably to several of the opinions entertained by the humoral pathologists. This is, in some respects, the best part of his book, notwithstanding the confined views which he has adopted. Upon the whole, this work has furnished us with a little that is good, combined with much that is objectionable. It is deficient in accurate opinions respecting the morbid derangements of structure that supervene in the progress of disease, and it is even apparent that he has not that predilection to this branch of medical science which is requisite to its successful prosecution.

The work of M. BOISSEAU on the nature of fever* is founded on a principle which may be still more directly imputed to the doctrine of Brown than that espoused by the foregoing author. M. Boisseau has referred all the vital properties to excitability, and, like the great originator of that term, has allowed it no other variations than that of quantity. This restriction was the great fault of that master, and it appears, at the present day, still more glaring in the pupil. M. B. has farther considered that the organs are merely more or less excitable, but that no one is endowed with an excitability specifically different: he even will not permit this property to be modified in kind by the causes of disease; he can perceive no other change than in degree.

Having thus contended for one vital property only always identical with itself, he is equally consistent in his pathology, and consistent, too, with the great pathologist from whom he has borrowed the physiological basis of his views. He has conceived that excitability can experience only two species of change, viz. *force* and *febleness*, *irritation* and *abirritation*—lesions in the degree of excitability, and not in its kind. Without entering into any criticism of this dogma, we may remark, that as M. Boisseau has considered excitability as the product of organization, the lesions of this property are consistently with his own opinions merely lesions of organization: but will it be believed that organization is capable of two kinds of derangement only?

M. B. has viewed *irritation* as presenting four degrees of intensity; and *abirritation*, or *asthenia*, as being that of function and of nutrition. Conformably with the physiology

* See Foreign Bibliography, in REPOSITORY for June, 1823.

which he has adopted, he conceives that if the excitability of one organ be irritated, that of other organs may be correspondently depressed; hence he imagines that the two opposite states of disease may exist together in the same body, in different viscera or textures, and succeed each other in the same organ or part. He considers it impossible that irritation of the whole system can exist, and, therefore, concludes that all fevers are local, but that such locality is various, and is different in different kinds of fever, some consisting in irritation of the gastro-intestinal surfaces, others of the meninges and substance of the brain, &c. As he does not allow the kind of irritation to change under any circumstance, we are therefore to look to its degree for specific differences; but here his views are nearly equally confined. The degree of irritation, which, in his opinion, produces fever, is one grade less intense than that which constitutes local phlegmasia, and this grade he considers the same in all fevers.

We cannot state more fully at present the views of M. Boisseau, nor can we examine their stability; they are chiefly a selection from former pathologists, and principally from Brown, Broussais, &c.; and, undoubtedly, if the selection had been made in a more extended manner, and if he had admitted more diversified changes in the vital conditions of the organs, he might have reared, in this manner, a more durable edifice; as it is, however, it presents much to admire; but that admiration is entirely confined to the details of the structure—to the workmanship bestowed on it: the design and the materials are both defective.

The work of M. DUGÈS * possesses greater merit, and that of a different kind from what we have had to regard in the foregoing authors. It presents more extended views of disease than those embraced by M. Boisseau, and although the illustrations which it contains of the particular species of fever are less full and complete, still the principles which it develops are much better founded, and lead to more just and important conclusions, both in pathology and in therapeutics, than those presented us in the work of M. Boisseau. Our limits now prevent us from recording the principles which M. Dugès has adopted. This, however, is of the less importance, as we intend to present them to our readers on a future occasion.

M. GAULTIER DE CLAUURY has reasoned with much ability in favour of the local cause of fever, in a memoir pub-

* *Essai Physiologico-Pathologique sur la Nature de la Fièvre, de l'Inflammation, et des Principales Néuroses, &c. Mémoire couronné par la Faculté de Médecine de Paris, 1821. Par Ant. Dugès, D.M. Deux volumes in 8vo. Paris, 1828.*

lished in the work which he edits.* This cause, however, he is not inclined to limit to one organ, but supposes it to be different in different fevers and in different epidemics. He considers the mucous surface of the stomach and intestines, and the encephalon, to be its more frequent seat.

Our readers will perceive, from these productions which have come before us during the preceding half-year, the laudable attention which the French pathologists have bestowed on the nature of fever. For this they are indebted, in a great measure, to the writings of Broussais. The subject of eruptive fever has been much less investigated by them within the period referred to. We have, however, received from them some interesting illustrations of the appearances exhibited after death in cases of small-pox. M. DOMMANGET, the author of an interesting article on this subject,† found, in several dissections, the membranes of the brain either inflamed, adhering, injected, or covered by effusion: the brain either softened, or the vessels of its substance injected: the lungs sometimes engorged, and occasionally hepatized: the pleuræ adhering, inflamed, or enclosing an albuminous effusion: the internal surface of the stomach and intestines more or less injected or inflamed, and the muscular coat contracted. These observations agree with those which have been made by Mr. JACKSON, especially as regards the appearances of the encephalon, in the excellent article on small-pox and chicken-pox, published by him in this Journal. We refer our readers to that article for some interesting observations connected with the pathology of both these disorders.‡

Few subjects present greater interest than that which relates to the comparative liability to disease at particular periods of life. Connected with this topic, M. BENNOISTON DE CHATEAU-NEUF has published an interesting memoir, which has received the approbation of the French Academy of Sciences,|| in which he endeavours to ascertain, from accredited sources which he has adduced, whether the mortality of females is greater at a critical period of their age than at any other. M. B. has drawn the inference, that, from the 43d degree of latitude to the 60th, in no period of female life between thirty and sixty-six, has he been able to detect any material increase of mortality beyond that which necessarily arises from increased age.

Between the age of forty and fifty, it would appear that

* Journ. Gén. de Méd. Avr. 1823.

† Ibid. Feb. 1823.

‡ REPOSITORY for May, 1823.

|| Mémoire sur la Mortalité des Femmes de l'Age de quarante à cinquante Ans. 8vo. Paris, 1823.

more men die than women; and during the same period, an increase of mortality among females may be noticed in large cities, while it appears even less amongst those who have led a life of celibacy or of restraint; but, although the increase may not be very sensibly observed during this period, many disorders may then form which produce their fatal consequences at a subsequent stage of life.

It now only remains for us to record those views which relate to pathology in a general manner. Some of these have been noticed in relation to fever, with which they are so intimately connected.

The very important work of Dr. PRING* falls under consideration at this place; and although we have entered on an analysis of it in another part of this Journal, we cannot feel ourselves justified in entirely passing by the profound views of this pathologist, on an occasion which would require a more detailed account of them than our limits can permit.

Dr. Pring has very justly stated, "that a certain condition, both of the life of structures, and of its alliances in the mechanical, chemical, and hydraulic departments, is necessary to health;" consequently, "a deviation from this condition, in the agents of either of these departments, may constitute disease. But, as the properties of these departments are intimately allied and related with each other, so a distinct or exclusive modification of either is rarely displayed by symptoms." Dr. Pring has illustrated this view in a most lucid and comprehensive manner. "The life of a seat," he has very justly observed, "in the state of disease, is changed; in conformity with general principles, we may infer that this change is produced by addition or subtraction of properties; but we cannot say to what properties the change is to be imputed, or in what the change consists. It has been attempted to limit the varieties of the condition of life to those of degree, but it most commonly happens in disease, that effects are produced, or symptoms exhibited, which cannot be accounted for by any variety in the degree or force of properties of life; on the contrary, such symptoms are generally to be explained only by supposing the operation of new or different properties, or of such as are preternatural, in the seat of disease, rather than by any variety in the degree of those which are natural." Thus it appears, that disease of the constitution of life "consists of a change, the nature of which cannot be defined, and, consequently, we are permitted to reason upon it with a view of deducing its laws only, from our experience of its effects or signs."

* See Bibliography, in REPOSITORY for May, 1823.

Dr. Pring has considered that the condition of disease, which respects the chemical alliances of life, "may consist either of a modification of the nature of chemical constitutions, which subserve the perfection of a living structure, or in the formation of new or preternatural products;" and that as the state of health is maintained by the concurrence of a precise chemical constitution, so one part of disease may be a deviation from this precise state.

"The condition of the disease," he has gone on to state, "with respect to the textures, may be said to consist in a modification of the natural organization which subserves the purposes of life and health, or in the destruction of the natural fabric, or in the formation of preternatural growths. As the textures are governed by the life which is allied with them, so their changes are secondary, and in the phenomena which they produce, in relation with life, they have only the force of reagents.

"The condition of disease, in the hydraulic department, is liable to varieties only of quantity and place: these varieties may respect blood or the secreted fluids. There is excess of fluids in those which are called the seats of determination, and privation of them probably, in certain cases of paralysis; and also in seats which suffer diminution of blood from their relation with a seat of preternatural derivation of this fluid; as, perhaps, in the uterus, in consequence of the derivation of blood to the head or chest, accompanying hysteria or hæmoptysis; in the feet, in almost every affection of the head," &c.

Having first illustrated these positions which relate to the condition of disease, Dr. Pring has successively applied his analysis in the most interesting and satisfactory manner; 2dly, to the relation of agents which constitute its condition; 3dly, to the relations of disease as a cause of more extensive or of different diseases; 4thly, to the laws of its continuance and varieties; and, 5thly, to those of recovery or of death.

On the second of those inquiries he has remarked, that "it very rarely happens that change in the condition of the life of seats is not accompanied by a change in its material alliance, which latter helps to constitute the condition of disease. Among the most frequent deviations from the natural mechanical state is that of increased vascular fulness. In every state of disease, even if there should be no signs of change in the material department, the concurrence of the organization is necessary to its existence as it is to life itself. Without deviation, then, from a healthy constitution, the mechanical and hydraulic departments subserve the establishment and maintenance of disease: but if signs of disease are

also exhibited in these departments, one of two results may be remarked; either, 1st, the phenomena of disease are merely multiplied by the influence of a changed condition of the properties of life on their material alliances; or, 2d, the phenomena of disease are multiplied, or its condition altered, by the reaction of the effect produced on the organization by the influence of a primary change in the condition of life. We shall have occasion to notice that this reaction is almost universal in disease, although it may not be attended by disorganization."

With respect to the third subject of analysis, Dr. Pring, after having considered the relations of disease as a cause of farther disease, first, with reference to the properties of the department in which it originates, has next viewed these primary changes with regard to their vital and material connexions and agencies in the production of consecutive disease, which consecutive derangement may in its turn influence the primary disease, and become a reagent of great power. We cannot at present state the comprehensive analysis he has laid down of the various relations and reciprocal dependencies subsisting between these properties of parts, nor can we sketch the illustrations he has given of the circumstances producing and influencing the continuance of disease, or of those causing recovery or death; those particulars, and the details connected with the foregoing principles, will be brought before our readers on a future occasion.

We cannot, however, pass on without recording some of Dr. Pring's fundamental principles, illustrative of his opinions respecting the continuance of disease. — Having laid it down as a physiological principle, supported by the evidence furnished by the operations of the animal economy, that there is no fixed or permanent sum of life, but that this principle is perpetually dying or changing its form; that each quantum renews itself by the assimilation of its identity from blood, or of a material which contains its elements, and then passes away, and is succeeded by a new quantum of a similar principle, produced by itself from a material by the separation and the union of its elements* — that "life is, renews itself, and dies," Dr. Pring considers, conformably to this doctrine, that "if the natural state of life has undergone the change in which disease consists, this change is only a modification

* Our readers will be so good as to recollect that we are stating the views of this eminent pathologist as matters of history. They will find the above particular tenet the subject of criticism when this part of the work shall come under review. — J. C.

of a principle, which is perpetuated by successive renovations. As the properties which constitute the change are united with or make a part of this principle, the conditions of the continuance of disease are either: first, that the state of life under such change should be one capable of assimilation, by which the properties of disease, in common with those others which belong to the natural state of life, are produced or renewed from blood; or, second, that the properties of disease should be constantly supplied from a source which is independent of a process of assimilation."

Dr. Pring has given very particular and most satisfactory illustrations of the agencies of the circulation in continuing and extending disease. "As primary disease," he has observed, "is a modified state of life, and as every state of this principle is renewed from blood, so the supply of blood to a seat of disease is necessary to its existence and continuance. In this point of view, blood concurs only with the structures to maintain properties of life, to which these alliances are essential.

"The connexion, then, of disease with blood, and its dependences on this fluid, may be thus enumerated:—1. Life is maintained by assimilation from blood.—2. Life is related with the distribution of blood, and in its natural state produces a natural circulation; or, under the modification of disease, an increased, and probably sometimes a diminished derivation of this fluid to its seat.—3. Primary disease, which belongs to the department of life, and assimilates, is maintained by the concurrence of blood, which furnishes the material of its renovation.—4. The increased derivation of blood depends, both in its degree and its continuance, upon the condition of life.—5. The dependance of the continuance of a disposition of life is upon assimilation.

"6. A preternatural state of local circulation may have, with life, the relation of a cause; and the influence of this relation may be: first, to modify directly the condition of life, and consequently its phenomena; second, to influence the assimilation of life, and consequently the duration of disease, if the change produced on life by an influence from the circulation is one which is capable of being in this way maintained; third, direct changes in the state of the structures may be produced by a change of the local circulation, which becomes thus mediately connected with subsequent phenomena, which are, according to the relation between life and the changes in the condition of the structures.

"7. These relations between the parts of the constitution of disease obtain also in disease of primary and secondary

seats; and the modes of influence between such seats is only a repetition of the order and dependence exemplified by the constituents of disease in one seat.

" 8. As blood maintains disease by its concurrence, and as it is related with the state of disease in the department of life also by affection, or is capable of influencing its condition; so the state of disease, whether with respect to the phenomena of affection or of assimilation, may be influenced by means whose direct agency is upon the circulation.

" 9. It is also a common effect of local disease to extend its influence directly by continuity of organic life, or through the medium of the nerves, with or without the participation of their centres, to the heart, by which this organ is made to concur in the supply of a preternatural quantity of blood to a seat of disease: and in this point of view, the action of the heart becomes very generally at once an indication of the degree and importance of local disease or irritation, and is also auxiliary to the power of derivation in the seat of disease, the energy of which is increased; and thus the action of the heart concurs in all the relations, both mechanical and vital, with the derivation of blood, and subserves to the increase, continuance, or modification of disease."

Dr. Pring has summed up his general principles of pathology in the following comprehensive paragraph:—" It appears from this view that primary disease consists of a change in the condition of life; that secondary related disease is an effect of this change; that the continuance of secondary disease is dependent upon the state which is assimilated in the department of life; that in the reagency of secondary disease, this state has the operation of a cause which is related with primary disease, or may produce other effects, in relation with the organization; that the relation of secondary disease, as a cause with primary disease, is to modify its state, and consequently its phenomena; that the results of such modification of its state may be an affection of life, while its assimilation is unchanged; or an affection of life, which disposes it for the assimilation of another state: in the former case, the same phenomena of disease are continued, unless changes differently related are induced on the structures; in the latter case, the assimilating state may be changed by the influence of secondary disease, and the results of this change may be progressive disease, or a succession of assimilating states; or the series may end in an assimilating state, producing other phenomena of disease; or it may terminate in death, or recovery. These events depend upon relations between properties which are only

inferred; and the events can only be anticipated, and that without certainty, by an experience of their connexion with the circumstances of the relation, which circumstances are denoted by signs, or symptoms."

Few works are better calculated to promote pathology than those which contain a well digested, faithful, and minute account of the progress, termination, and appearances of individual cases of disease; whether we view those works as furnishing materials whence we may deduce important principles in pathology and therapeutics, or as tests by which we may ascertain the validity of the doctrines more generally adopted. It is chiefly on this account that the works of BONET, MORGAGNI, LIEUTAUD, BANG, STOLL, REILL, the FRANKS, PROST, PINEL, and several others, are esteemed. Within the period embraced by this essay, the Parisian school has furnished us with a work of this description, the materials of which have been collected by M. TACHERON, with considerable care, from the records of the different Parisian hospitals. The very numerous observations which it contains, and their unquestionable authenticity and accuracy, render it a production of great merit, as a work of reference. Viewing it in this light, we have placed it on the same shelf with the above-mentioned authors.*

The article entitled *déviatiou organique*, by M. BRESCHET,† will be read with interest, on account of the general views entertained by the author respecting those derangements of structure to which the fœtus is liable in the womb.

THERAPEUTICS.—Commencing, in conformity with our arrangement, an account of the additional views entertained respecting the treatment of disease with those which regard the *nervous system*, the case of epilepsy connected with paralysis, recorded by Dr. H. W. CARTER,‡ deserves particular notice. In this instance, the important therapeutical intention of arresting an internal irritation by means of a pustular eruption on the surface, was undertaken with advantage.—The case of paralysis published by M. NÎLO,|| which was successfully treated with *nux vomica*, furnishes a proof of the propriety of employing active stimulants under certain

* *Recherches Anatomico-Pathologiques sur la Médecine Pratique, faites à l'Hospice Clinique Interne de la Faculté de Médecine de Paris et dans les autres Hôpitaux. Trois volumes in 8vo. Paris, 1823.*

† *Dictionnaire de Médecine, par MM. Adelon, Béclard, Bielt, &c. Vol. VI. p. 526.*

‡ *MEDICAL REPOSITORY* for May, 1823.

|| *Journ. Gén. de Méd. Novembre, 1822.*

circumstances of this disease, and of the efficacy of this remedy when judiciously employed.—The propriety of employing tonic remedies, combined with narcotics and sedatives, in many cases of mental derangement, but too frequently treated on an opposite system, has been contended for, as our readers are aware, by Dr. WILLIS. In that species of derangement denominated by this writer the high state with fever, the exhibition of small doses of the anti-monium tartarizatum, repeated frequently, and combined with such narcotics as circumstances may indicate, is, according to our observation, one of the best modes of practice that can be adopted. The combination of these remedies with tonics and aperients, according to the state of the patient, is also frequently necessary in the state of high mental derangement to which Dr. Willis has particularly drawn attention, especially under those circumstances to which we have referred, when treating of the additions made to our knowledge of the pathology of the brain.—The very instructive case of mania recorded by Mr. P. C. BLACKETT,* in which the treatment just mentioned was employed, fully confirms those therapeutical views.

The discharge of serous infiltrations of the *cellular texture* by external means is frequently a matter both of difficulty and danger. We have, however, been indebted to Dr. SUTTON and Mr. FINCH † for employing a method to which neither of these exceptions can be taken, and which appears to us to be a valuable addition to the means of cure usually resorted to in derangements of this description. The method to which we allude is the employment of acupuncture in removing serous accumulations in cellular structures. This means may be adopted with advantage under circumstances that might render the punctures by a lancet unavailing and dangerous, as the instructive case alluded to demonstrates; and if we may be permitted to give an opinion on the merits of this practice, as a matter of speculation, we should be induced to conclude that it fully deserves to be generally adopted, and to be extended to the treatment of other disorders, in which it has not hitherto been employed.

The propriety of treating the more violent and more permanent spasmodic affections of the *muscular system* by the exhibition of the oil of turpentine, has been demonstrated by the observations of Mr. B. HUTCHINSON and Mr. TOMS. ‡ The cases which occurred in the practice of both these gen-

* REPOSITORY for June, 1823. † Ibid. for March, 1823.

‡ Medical and Physical Journal for Feb. and May, 1823.

tlemen presented nearly similar characters, and very much resembled tetanus. The disease disappeared in both instances after the exhibition of three or four doses of this remedy, consisting of half an ounce in each dose, which was given every two or three hours.

The advantages of treating derangements of the secreting functions of *glandular textures* with large doses of tartarized antimony have been satisfactorily shown by Dr. FONTANEILLES.* The services that may be obtained from this excellent remedy in disorders of the hepatic function, either when given alone, or combined with other medicines of an aperient, sudorific, antispasmodic, or tonic nature, have been long and generally acknowledged. The chief circumstance worthy of record in the practice of Dr. Fontaneilles, is the exhibition of this remedy in large doses in cases of icterus; its employment in smaller quantities, combined with aperients and deobstruents, has always been adopted in this disease by judicious Practitioners since the introduction of antimony into medical practice.

The removal of those glandular disorders that depend more upon alteration of structure than of function, and which appear to consist of a changed condition of the assimilating process going on in the capillaries of the part, has been ranked amongst the acknowledged difficulties of our Profession until very recent times. Some forcible evidence has been adduced, in several of the former Numbers of this Journal, in favour of the beneficial results of the preparations of iodine, when employed either internally or externally in the treatment of disorders of this nature. The employment of these remedies in scrofulous derangements has been lately adopted both in this country and on the continent. The work of Dr. BARON, already referred to, has furnished some excellent information respecting the use of this substance with reference to the disorders more immediately under consideration;† and Mr. J. B. AUSTIN has published an interesting proof of the superior efficacy of this remedy to burnt sponge in the treatment of bronchocele.‡

Diseases of the *mucous surfaces*, from the frequency with which they are presented to our notice, should always claim attention, not only with respect to their pathology, but as to the most efficacious means of removing them, without experiencing the risk of some other more serious derangement supervening in their stead. Some interesting facts have

* Rev. Méd. for Mars, 1823.

† REPOSITORY for March, 1823.

‡ Medical and Physical Journal, No. 284.

come to our knowledge respecting the treatment of inflammation of the mucous surface of the digestive canal. A very important communication relative to this subject, for which the Profession is indebted to Dr. WHITLOCK NICHOLL,* has illustrated, in a very satisfactory manner, the beneficial effects of the oleum terebinthinæ in certain morbid states of this surface; and has corroborated the testimony we gave, on another occasion, of the efficacy of this substance both in diarrhœa and in chronic dysenteric affections.† In a case of dysentery supervening to strangulated hernia, recorded by Mr. ROBINSON,‡ the same remedy was resorted to with immediate advantage, at a time when the energies of the system were greatly exhausted.

Some observations on "diseased states of the mucous membrane of the stomach and bowels" have been made by Mr. WALLER;|| and nine cases, illustrative of the efficacy of the soda tartarizata and potassæ sulphas in the removal of these derangements, have been adduced by him. Of the justness of these observations, we are fully convinced from experience; indeed, the use of both these substances in inflammatory affections of this membrane must be familiar to many Practitioners, although others may not employ them so frequently as other means.§

Proceeding next to notice the additions which have been

* REPOSITORY for May, 1823.

† "In the *chronic diarrhœa* of children, in which there is every reason to suspect slow inflammatory action to exist in the mucous coat of the intestines, and in the follicular glands in that situation, few remedies (if it is suitably combined, and given after a properly digested plan, according to the circumstances of the case,) are likely to be of more permanent service.

"The plan I have generally pursued in those cases, has been to prescribe a powder to be taken at bed-time, composed of the hydrarg. submur. — pulv. ipecac. comp. — pulv. rhei, or the pulv. tragacanth. comp. in proportions according to the circumstances and age of the child; and a draught, in the morning, of the oleum terebinthinæ enveloped in mucilage, with the requisite corrigents. A medium dose in this affection has been the quantity usually prescribed." See also our observations, at the same place, on the use of this remedy in chronic dysentery. — *Memoir on the Use of Terebinthinous Remedies in Disease.* Med. and Phys. Journ. for August, 1821.

‡ REPOSITORY for April, 1823.

|| Medical and Physical Journal for February, 1823.

§ The late Dr. SAUNDERS was very partial to the use of the sulphate of potash in disorders of the mucous surface of the digestive canal, from a well founded acquaintance with its efficacy in such cases.

made to our views respecting the treatment of disorders of *particular functions*, those of the *digestive organs* first claim our attention. Considering diabetes as a disease chiefly of this function, in conformity with the pathology already stated, the interesting instance of this disease, recorded by Dr. HEINEKEN, of Madeira,* deserves particular mention at this place. The very judicious indications of cure which this case exemplifies, and the very decided and efficacious means employed to fulfil these indications, will be consulted with advantage by all who desire to obtain satisfactory information with respect to this obscure and difficult disease. — The case of diabetes published by Dr. NEUMAN, of Berlin,† which supervened, as it not unfrequently does, to dropsy, was successfully treated by large doses of the carbonate of ammonia, a remedy which has been frequently employed in this country, in combination with opium, although not to so great an extent as it was by this Physician, in the case referred to.

Few derangements are of more frequent occurrence, or deserve greater attention, than those which occasion, or which result from, the generation of intestinal worms. This subject has received a very interesting elucidation within the period embraced by this essay, especially as regards the expulsion of these animals from the body. The memoir of Dr. KENNEDY,‡ to whom we are indebted for this accession to our information, will be perused with advantage by all who wish to obtain the requisite information respecting the treatment of verminous diseases. Nor is the importance of Dr. Kennedy's communication limited to an illustration of the efficacy of the therapeutical agent which he employed: it contains pathological views of importance, as well as some interesting information regarding a species of vesicular worms, which is but seldom the object of observation.

The treatment of obstinate constipation of the bowels has been promoted by the case recorded by Mr. DENDY,|| in which the oil of croton tiglium proved immediately successful after every other remedy had failed. This case is also valuable, inasmuch as it shows that this remedy may be employed without risk, even when symptoms indicate considerable fever, and inflammatory action in the bowels.

Referring next to the practical views connected with dysentery, the employment of the acetate of lead in that disease has been lately a subject of attention with American Practi-

* REPOSITORY for April, 1823.

† Hufeland's Journal for 1823, and REPOSITORY for June, 1823.

‡ See REPOSITORY for February, 1823.

|| Ibid. for April, 1823.

tioners. Some of them laud its efficacy, while others condemn its use as not only inefficacious, but even hurtful. Dr. R. HARLAN,* of Philadelphia, has published seven cases of dysentery which were successfully treated with this substance in combination with opium; and an anonymous writer confirms the same views. The doses of these remedies, and the frequency of their exhibition, were modified according to the circumstances of the case. It ought, however, to be remarked that this is by no means a novel practice; Dr. JACKSON, to whom medical science has been so greatly indebted, and Dr. MOSELY, have both employed the sugar of lead in acute and chronic dysentery in the West Indies. The Editors of the American Medical Recorder remark, respecting the use of this preparation, that in one case out of four or five in which they employed it, its effects were unequivocally injurious: in that case the discharges were speedily checked; "but the patient was incessantly tormented by a painful pressing down of the bowels," and much general distress. Professor WENDT, of Copenhagen, has stated† that he has found a decoction of the *triumfetta semitriloba* of eminent service in this disease. It has been long in use as a domestic remedy in the West Indies.

The diseases of the *respiratory organs* have lately received considerable attention, with respect to their treatment. The work of Sir ALEXANDER CRICHTON, to which we have before referred, will be consulted with advantage on several disorders of these viscera; and the illustrations of tuberculous diseases by Dr. BARON will furnish some interesting information respecting the employment of the preparations of iodine in derangements of this nature, seated in the lungs or investing membranes.

The article on hooping-cough, by Dr. GUERSENT, in the dictionary of medicine now publishing at Paris,‡ has furnished us with a full and satisfactory exposition of the pathology and treatment of this disease. The therapeutical indications and the remedial means in this disease have been pointed out by this Physician with more discrimination than in any other work which has come under our observation.

The very important case of empyema, with the interesting remarks respecting it, which was laid before our readers by Mr. BETTY,|| and which was so ably and successfully treated by this judicious Practitioner, cannot fail of exciting the atten-

* American Medical Recorder, No. 20.

† Nye Hygea, Januar. 1823.

‡ Dictionnaire de Médecine, Vol. VI.

|| REPOSITORY for March, 1823.

tion of the Profession to this species of lesion. A somewhat similar instance of successful treatment in this almost hopeless derangement, has been published by M. LARREY,* and exhibited by him with all that bustle and pretension which mark the conduct of this bold and decided Surgeon, and which arise more from a laudable zeal in his Profession, joined with a want of tact in guiding his enthusiasm, than from any sinister or selfish motive.

The case of cynanche laryngea recorded by Mr. GAITSKELL,† has furnished a useful instance of the efficacy of a judiciously directed treatment in removing this dangerous disorder.—The case, also, of pulmonary consumption, by the same gentleman, has illustrated the propriety of producing artificial eruptions in the treatment of this malady.—A communication, by Dr. JOHN HUME,‡ has conveyed some important remarks in support of the tonic treatment of phthisis pulmonalis, a method of cure long since recommended by Salvadori, May, Pears, and Murray; and even as early as the times of Cælius Aurelianus. Dr. Hume, however, has not contended for the employment of the tonic plan under all circumstances of the disease.

“Of all the modes,” he has observed, “of treating phthisis, either incipient or confirmed, the tonic appears to be decidedly the best. But to be successful, this treatment must be commenced at a very early period. Then, provided there are no inflammatory symptoms, frictions with cold vinegar and water, twice a day, on the breast or the whole body, till the skin is quite dry; exercise in the open air, on horse-back, in a carriage, on foot, or in a swing, according to circumstances; nourishing, but plain food, taken at such intervals as not to load the stomach, with the occasional use of steel and bitters; are the most proper remedies. Pain in any part may be removed by the application of leeches, aromatic embrocations, blisters, or the tartar emetic ointment.”

No actual addition has been made to our therapeutical views, in relation to the diseases of the *urinary organs*, within the period to which we confine this sketch; for, although we have had two works on these derangements, which have been placed fully before our readers, they chiefly convey useful illustrations of acknowledged principles of practice, and of ascertained means of cure.—Under the head of the generative organs we have only to notice a species of

* *Revue Médicale*, Mai, 1823.

† *REPOSITORY* for April and June, 1823.

‡ *Quart. Journ. of For. Med.* for Jan. 1822.

intermittent menorrhagia, which was successfully treated by means of bark, by M. DESLANDES.*

We now arrive at the last division of this subject, namely, to record the observations which may be considered as additions to our therapeutical views respecting those derangements which influence the system in a general manner. Here we find but little to arrest our attention. The treatment of fevers contended for by the authors whose works have been already alluded to, has been, in most instances, a judicious application of well-known principles and remedies. The works of MM. BOISSEAU and DUGÈS contain a most satisfactory exposition of the therapeutical intentions and means which ought to be employed in the different species of fever: indeed we know no works that can be consulted with greater advantage on these topics than these, more particularly that by the former author.—The different memoirs, whose history we sketched under the head of Pathology, furnish useful illustrations of the treatment of the particular endemic and epidemic forms of this disease to which they relate.—The account given by Mr. JONES of the yellow fever which appeared in an epidemic form in the island of Bermuda,† while it shows the local origin of the disease, evinces the propriety and success of a depletory plan of treatment in its cure, which, although it was generally, appears not to have been indiscriminately used. The treatment employed in the fever lately prevalent at Newcastle, as described in Mr. H. EDMONSTON'S paper relative to the subject, was “gently antiphlogistic, chiefly consisting of local blood-letting, purgatives, diaphoretics,” &c.

A memoir on the scarlet fever, which occurred in an epidemic form in 1819, at Beauvoir-sur-Mer,‡ by M. OLLIVIER-MAIRY, of Nantes, has evinced the propriety of attending to a well established principle in the treatment of some forms of this disease, which was very nearly overturned, for a time, in this country, by the phlogistic diathesis so lately prevalent, in a too general manner, amongst Practitioners. The principle to which we allude is the treatment of those varieties of scarlatina which present great depression of the vital energies of the system, by tonics, astringents, stimulants, &c. M. O. has also shown the propriety of employing evacuations in those serous effusions which supervene to this disease.||

* Journal Gén. de Méd. Mars 1823.

† REPOSITORY for March, 1823.

‡ Nouveau Journ. de Méd. Dec. 1823.

|| Evacuations to a greater or less extent are requisite in dropsies occurring under these circumstances, whether the previous disease

The only general system of therapeutics which has come before us within the by-gone half-year, is the very important sketch which has been given by Dr. PRING. This author has analyzed the generally received views on this subject, and has stated his own—1st, as they regard the speculative doctrines of therapeutics; 2d, as they respect the practical principles of this science. He has very justly remarked, in relation to the former of these topics, that “whatever doctrine of disease has prevailed, the same remedies have been resorted to: the means were the same; the explanation connected with them only different.” The speculative explanations connected with them, as well as the applications to practice of the views and principles which this eminent writer either examines or advances, cannot be sketched within the limits of an historical essay. They will be made the subjects of analysis on a future occasion.*

J. C.

Jermyn Street, St. James's, 26th June, 1823.

PART II.

ANALYTICAL REVIEW.

I.

An Exposition of the Principles of Pathology, and of the Treatment of Diseases. By DANIEL PRING, M.D. Member of the Royal College of Surgeons. 8vo. Pp. 512. London, 1823.

THIS is a work calculated to introduce an important reform into the medical literature of the age. Its author,

has been inflammatory or the contrary: for when the exhaustion has been extreme, the loss of vital energies has been chiefly expressed, owing to the eruptive nature of the disease, on the extreme capillary vessels, which frequently do not acquire their tone before the increased action and energy of the heart and large vessels impel the blood with a greater impulse than their exhalants and the tonicity of their extremities can withstand. Hence the frequency of these effusions after a too stimulating treatment, and want of attention to the natural evacuations, during recovery from scarlatina.—J. C.

* The historical view of the remaining branches of medical science will be given in our next Number.

while he appreciates fairly the value of correct investigations, and intimate and profound views in pathology, exposes ably and energetically the fundamental tenets of the existing systems of medicine: and while he examines the principles of our science, with great candour and judgment, and with great force of reasoning and happy methods of illustration, he separates, with acute powers of discrimination, the valuable results of observation and experience, from the numerous assumptions and conjectures which have often served as the basis of vague hypothesis and speculation. The very extended and comprehensive views, also, which the author takes of the causes, relations, and phenomena of disease, place his own conclusions on a firmer basis than that possessed by any pathologist who has preceded him, in advancing general principles of the nature and treatment of disease. Without offering any preliminary observations, we shall proceed to analyze his interesting production.

The work is divided into ten chapters: the 1st is an examination of the *humoral pathology*; the 2d of the *doctrine of spasm*; 3d, of the *doctrine of Brown*; 4th, of the *pathology of the determination of blood*; 5th, of the *origin of disease in the abdominal viscera*; 6th, of the *origin of disease in the nerves*; 7th, of the *relations of disease*; 8th, *general principles of pathology*; 9th, *speculative doctrines of therapeutics*; 10th, *practical principles of therapeutics*. Six of these chapters are entirely critical; but while the author examines, in a profound manner, the principles which characterize the particular systems which these chapters embrace, he discloses views which are more fully developed in the subsequent parts of the work. It will readily be seen that it will be out of our power to analyze, in a suitable manner, and within our limits, those parts of the volume which are themselves essentially a review: we shall only endeavour to convey an idea of the manner in which Dr. Pring has executed this part of his undertaking; nor shall we regret the way—so unsatisfactory to ourselves—in which we are obliged to perform our office; since we are confident that to all those who esteem profound views in pathology, and a critical deduction of sound principles, by which they may guide their speculations and practice, an extended analysis of this work will be almost superfluous, as they will be contented only with a repeated perusal of the work itself; while to those, if there be any such at the present day, who value only empirical precepts in medical practice, and who condemn pathological principles—the philosophy of our Profession—any review of a book like the present will be unacceptable.

Chapter I. Humoral pathology.—Dr. Pring justly remarks, that although the humoral pathology has now given place to other doctrines, yet the evidences in favour of it are quite as conclusive as those for some of the opinions by which it has been superseded; “yet, although it is not held,” he observes, “in much reverence by pathologists, it is still the popular one: it appears more level to general apprehension than any other; and it is by no means uncommon for those of the Profession to avail themselves of this popular apprehension, and to account for many circumstances, which they are called upon to explain, upon false or absurd principles, rather than to risk the suspicion of not being able to explain them at all. Thus they oftentimes gain credit for superior knowledge: and those who can condescend to accept reputation upon such terms are seldom deficient in the information, that an appeal to the fallacies and prejudices of human nature is generally more successful than an address to its better understanding.”

After noticing the causation contended for by the humoral pathologists, and after pointing out their errors in regarding matter as originating disease, and in resorting to mechanism for the explanation of the animal phenomena, Dr. P. remarks, that analysis has taught us to look to another set of powers, — has taught us to regard these morbid matters not as the causes, but as the effects or products of disease. “In all instances in which the order of occurrence is perceptible in the generation of the morbid poisons, the disease precedes the formation of the matter: thus the immense pustular eruption in small-pox is the consequence of the fever incident to this disease; and thus irritation, in all other instances, precedes, and does not follow, the purulent or lymphatic secretions.” This is unquestionably just both as it respects the generation of morbid poisons strictly so called, and of several other secretions. The change is first produced on the vital properties of a part, or of the system generally, before the morbid matter is formed; and then such matter is not formed *in* the mass of blood, but *from* the blood, by the previous change induced in the vital properties possessed by the capillary vessels or texture of the part whence the morbid matter is produced. Yet, although this appears to be the succession of phenomena which an intimate view of the matter would lead us to adopt, there are other circumstances of disease in which the causation is not so apparent, and some in which the mass of fluids seems to be more intimately and immediately concerned: but even in the majority of these a strict analysis will convey us to a previous cause; and we shall frequently discover some defect in the

vital functions or properties of an important organ or viscus. Thus, as we have stated on a former occasion, the nature of a climate or the state of the atmosphere shall impede or diminish the functions of an important organ employed in producing certain changes on the blood, or in eliminating from it certain of its elements, or the effete matters which it may contain. The consequence is an excess of these elements or materials, which, if not removed by the vicarious office of another viscus, will be the cause of either a general or local disease. In such cases, although previous disorder may be inferred, but little sensible derangement can be noticed until the circulating mass of fluids has become changed in such a manner as to disorder the healthy relations of the system. This point could be farther illustrated by proofs derived from a strict investigation of those maladies which result from the presence of a noxious cause inhaled into the lungs, or received into the digestive canal, &c. We believe, however, that a strict examination of the causation, in these cases, will also furnish us with evidence equally favourable to the opinion, that a portion, if not the whole, of the noxious cause has been received into the circulation, deteriorating or changing the vital properties of the system by its presence there, as that which can be brought in support of the opinion that the morbid impression has only been made upon the vital relations of the part to which it was immediately applied, without at all affecting, in a primary manner, the state of the blood, or acting by its presence within the blood-vessels. If we were required to state our belief upon this important and fundamental subject, we might, from some attention long paid to the subject,* illustrate fully what we shall beg leave to say briefly, that such causes appear to act in both these modes, in many instances, and more or less in either, in other cases: that while some of them, owing either to their own properties or to the state of the recipient, affect the vital relations of the parts which they invade, or which are most sensible to their impressions, externally to the blood-vessels — without being absorbed, others are received into the circulation, are carried along with it throughout the textures, and, from their presence within the vessels, produce their effects on the system: and that many of them seem to act in both the modes pointed out; the one mode preponderating to a greater or less extent, according to the nature, relations, and combinations of the cause, and circumstances of those on whom it acts. — But to

* See a Letter to Dr. Hutchinson in Vol. XLIV. of the Medical and Physical Journal.

return to our author, from whom our partialities to humoralism could alone have drawn us —

Dr. Pring next discusses the properties of those morbid poisons which affect the animal economy in a specific manner; and considers that they have certain vital properties or relations bestowed on them, at the period of their formation, which are calculated to influence the system in such a manner as to occasion the formation of a substance — a matter — or morbid poison, similarly constituted to that which produced it: but we will allow the author to speak for himself on this interesting subject, and to state the lengths to which he carries his opinions.

“ It is more agreeable with the results of analytical inquiry to conclude, that the animal poisons contain latent properties of a vital kind, which are related to those of the same kind in living bodies; that the phenomena of disease or death, which ensue from the operation of the animal poisons on living bodies, are according to the nature of the properties which are engaged in this relation. It seems proper, in all questions which respect the nature of the properties to which animal processes are to be assigned, to consider those agents as belonging to the department of life whose operation cannot be explained by any perceptible analogy to the agency of chemistry or of mechanism.” “ It appears, then, that certain animal fluids are endowed with the qualities of poisons, by latent vital properties which are allied with the fluid material. This affinity between these subtle properties and the grosser fluid prevents the dissipation of the former, and preserves also the characteristics of the latter; it serves at once to limit and to extend the relations of the poisonous qualities: by it these qualities have a fixed place; and by the medium with which they inhere, they are capable of mingling with the fluids of animal bodies, and of being, in this way, conveyed into the circulation. It appears probable, that by the existence or absence of this affinity between the active properties of the animal poisons and a fluid medium, the distinction may be furnished between the contagious and infectious diseases. According to the entire absence or the degree of this affinity, we should find some diseases which are wholly infectious, others which are both infectious and contagious, and others which are only contagious.” — Pp. 10, 11.

This is an ingenious explanation of a difficult subject; and, although many powerful objections may be urged against it, yet we think no better mode of accounting for the perpetuation of contagious disorders has been proposed, — and, indeed, none so good. The concluding sentence of the quotation would have been more perspicuous, if the author had informed us as to the exact meaning he attaches to the words contagion and infection.

The next topic of importance which the author examines is the opinion respecting an error loci. This term, and the

meanings attached to it, are noticed and compared with the more usual terms at the present day, viz. congestion and obstruction. With respect to the imputed obstruction of secreting organs, the liver furnishes him with an appropriate subject of examination, and, indeed, of illustration: and here he justly observes, that allowing "the secerning system of the liver to be obstructed by the fluid which it separates, and which is still contained in tubes subject to the impulse of the circulation, the secretion has then only the force of a reagent in disease, the primary cause of which is a disordered state of those powers of life by which the separation of bile from blood is accomplished." This is exactly what we should conceive; but we will even go farther than our author, and contend, even if the flow of blood in the vessels be impeded or obstructed, that this state of the blood, as well as a similar obstruction of the bile contained in the secerning system, (which, however, we believe to be, in that situation, beyond the impulse of the circulation,) are the result of the same cause, namely, of those vital properties with which the vessels of this organ are endowed; because we conceive that the circulation of the blood in the portal vessels of the liver, the secretions from these vessels, the condition of these secretions, and the flow of the secreted fluid along the vessels containing it, are all the result of the properties — powers — or influences with which these tubes are endowed, from a source which it is unnecessary to inquire into at this place. What has been now stated regarding the liver may be extended to other secreting organs.

Dr. Pring offers a remark on the relation of the absorbent system with this subject, which should be kept in mind. "Whether, supposing," he observes, "the secretion of bile or of urine be healthy, the absorbent function of the structure in which calculi are found may be supposed to have any agency, as by a partial separation from bile, or urine, of some constituents, leaving a concreted residuum, is a conjecture, for the decision of which we want facts." — From this topic Dr. P. passes on to consider some facts connected with the state of the blood which have been lately but too much neglected; but which, we predict, without pretending to more inspiration than was allowed by Pliny to the *medicinæ vates*, will receive a more general attention; since pathologists, instead of attaching themselves exclusively to one particular creed or dogma, are taking more extended views of the operations of the animal economy, and are attaching themselves more to the simple results of observation, than becoming partisans of a particular sect. These facts connected with the state of the blood relate chiefly to its colour,

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extended to the venous and arterial trunks and ramifications, in internal and vital organs, or in the vicinity of the head, the vital condition of which may be altered, independently of the retention of fluids of a noxious kind.

Dr. Pring farther argues against the supposition of suppressed perspiration being the cause of many diseases, from the circumstance that several disorders which are more commonly imputed to such a cause, run a protracted course, while patients labouring under them have been frequently and long bathed in sweat. He afterwards notices a third mode in which spasm may act in producing disease, which we have just stated, viz. internal plethora or altered relations of the internal vessels; but the supervention of such conditions or relations of blood-vessels, he justly contends, may be imputed to some predisposition in the seat of disease not existing in other parts of the body, which predisposition does not amount to actual disease, although nearly allied to it, until exposure to cold or any other exciting cause produce that state of the system usually attributed to spasm of the superficial vessels.—The observations which the author makes respecting the morbid qualities which have been ascribed to the perspiration in relation to the doctrine of spasm are interesting: the same may be still more deservedly said of his examination of this theory, as it has been employed to account for inflammation. Here his remarks evince great powers of discrimination, and convey illustrations derived from an intimate view of the phenomena which take place in the vascular system from the application of various agents.

Chapter III. Doctrine of Brown.—"The doctrine of John Brown," Dr. Pring very happily observes, "was a production of genius; an offspring of the imagination, but little corrected by the understanding: it was an intellectual meteor, the light of which was brilliant, but deceitful and evanescent. Such was its general character and destiny: a few rays have, however, survived, and still rescue the doctrine from entire oblivion." The fundamental principle of Brown, that an animal was originally endowed with a fixed sum of the principle of life, "which was afterwards to undergo perpetual and rapid exhaustion to the time of its death, is contrary to all analogy." Yet upon such a basis was his doctrine built. Dr. P. adduces very cogent arguments against this postulatam, which most satisfactorily disprove both it and the inferences deduced from it. We regret that our limits prevent us from giving an analysis of many excellent observations which Dr. P. has introduced in the course of his reasonings on the principles of this pathology; we can merely briefly

notice the manner in which he examines its leading characters. Having shown the unsoundness of the assumption, that animals are endowed with a certain sum of excitability at their birth, which forms the physiological basis of the doctrine, he next examines the pathological principles which have been built upon it, and which, although they must necessarily fall with the assumption which served as their basis, yet deserve attention as they have received the sanction of many who never entertained the fundamental part of the creed. Diseases, according to this pathology, are only of two kinds, one arising from excess, the other from deficiency of vigour or excitement, which latter term designates the state of life—all diseases being attributed by it to the state of the excitement. The author goes on to argue against this arbitrary assignment of some disorders to certain supposed degrees of excitement, by adducing those instances where many of the phenomena referrible to vigour or excessive excitement are present, while others essential to the existence of this state are either entirely absent, or exist in a very inferior degree. He very justly remarks that there seems to be no degree of life, as far as may be judged by the energy or debility with which any one or more function is performed, which does not obtain in diseases different, perhaps opposite, in their general character; and that as strength depends upon one state of the related agents of life, so debility must always ensue from a deviation from this state.

Another source of error, and we think the principal one in the pathology of Brown, is the manner in which it draws attention entirely to degrees of excitement in particular organs, or in the general system, instead of attributing any share of the cause to some alteration in kind—to some change in the vital manifestations different from degree, impressed upon a part or the whole of the system by the cause of disease. The consequences of this error—the exclusive reference of disorders to sthenic or asthenic states of the system, as they display conditions which he conceived to be above or below that middle quantity which he attributed to health, are not confined to and visible in his pathology only, but are banefully extended to and particularly manifest in the general and special indications founded on that basis; and, whether intimate views of the animal economy in health or disease, or the effects of medicinal substances, be referred to, the confined ideas which the doctrine inculcates, notwithstanding the beauty of its simplicity, become equally apparent.

We confess that our limits cannot allow us to enter fully

and adequately into the merits of the pathological dogmata of the doctrine of Brown; nor would we have occupied so much space with its consideration, but that we know, that several of its terms are still retained in medical reasonings, and frequently employed without any definite meaning being attached to them. With a similar impression to our own on this subject, Dr. Pring enters upon an elaborate, but, we think, not happy discussion of the question, as to the degree of excitement or of power with which functions are exercised; and, at this place, he examines very fully the distinction between degree and quantity, a distinction which ought not to be lost sight of in our speculations respecting the vital operations. After stating and illustrating the distinction, which will be obvious to most of our readers, he considers the relations of each of these terms individually, and afterwards views them as they are related to each other. Here, also, the author is always profound, but frequently obscure. We refer our readers to his exposition of these topics; they do not admit of abridgment.

Dr. Pring proceeds next to examine, at considerable length, the pathology of Brown with reference to its application to the doctrine and treatment of fever. The views which he discloses, in the course of this inquiry, are clear, just, and comprehensive: we recommend them to the attentive perusal of our readers, on account of the very excellent and practical principles which he has deduced from them, and which he has illustrated, from his enlightened experience, in a manner that will interest every Practitioner, whatever pathological dogma or practical precept he may entertain.

Our limits cannot allow us to give such an account of Dr. P.'s observations at this place as would convey a satisfactory idea of them, and we are unwilling to compromise ourselves or our author, in the opinion of our readers, by stating them in an inadequate manner; we, therefore, refer them to these ample and practical remarks, to which we now allude, and with which Dr. Pring has concluded his examination of the doctrine of Brown.

[The other Chapters of this work will be analyzed in our next Number.]

II.

A short Treatise on Operative Surgery, describing the principal Operations as they are practised in England and France; designed for the Use of Students in Operating on the Dead Body. By CHARLES AVERILL, Cheltenham, Member of the Royal College of Surgeons, London. 8vo. Pp. 172. London, 1823.

BELIEVING this to be an useful little work to the surgical student, we consider it our duty to introduce it to their notice. Its author justly remarks, in his introduction, that, in order to perform surgical operations, when they are necessary, with dexterity and safety, frequent practice in the dissecting room on the dead subject is requisite, and ought to be more attended to in a surgical education than it usually is in this country. The methods of operating which he describes, are, he informs us, the most approved, and such as are now generally pursued. Mr. Averill has prefaced some of the operations by historical remarks, which exemplify the improved state of surgery; and he has very properly arranged them in a manner consistent with presenting the greatest number practicable on the dead body. We concur with Mr. A. in considering this a desirable object, "and now rendered too imperative, by the impediments so injuriously opposed to the supply of subjects."

Mr. Averill commences his work with directions respecting what may be considered the principles of operative surgery, namely, the manner of making the different incisions, of puncturing abscesses, dilating sinuses, tying arteries, &c. He next proceeds to describe the various operations on arteries, and afterwards gives directions for performing the other surgical operations usually resorted to. It is evident that a work of this description is incapable of satisfactory analysis; its merits may be inferred from the following case:—

"WRY NECK. — The history of the following case may serve as a guide in practising the operation, as well as one proof of its success:— A little girl, about ten years of age, whose neck, or rather whose head, had been awry for three years, owing to a permanent spasmodic contraction of the sterno-mastoid muscle of the right side, was admitted into the Hôtel Dieu, Paris, early in January, 1822. On the 16th of that month the operation was performed by M. Dupuytren, as follows:—

"The patient reclining against an assistant, a puncture was made, with a straight narrow bladed bistoury, through the integuments just on the inner border of the sternal extremity of the contracted muscle. The blade of the bistoury, being flatly opposed to the muscle, was

pushed cautiously behind it, the point being directed forwards and outwards till it protruded just on the outer side of the clavicular border. The edge of the bistoury was then turned towards the muscle, and a sufficient quantity of its posterior fibres cut to allow of the head being placed erect : the instrument was then withdrawn.

"In this way the integuments escaped being divided, and a future scar was prevented ; a very desirable object, the patient being a female.

"The cut edges of the muscle were kept asunder by depressing the clavicle, and inclining the head to the left side. The former was effected by binding the right hand firmly to the foot, the knee being bent : thus the clavicular fibres of the deltoid drew the bone downwards ; the latter by a roller passed round the head and under the left axilla.

"The patient was kept in bed ; and at the end of thirteen days the punctures were healed, and she had free motion of the neck, though from long continued habit she still turned her face to the left side. The bandages were reapplied, and the same bodily position maintained till the 21st of February, when they were finally taken away, and the patient pronounced cured, the head being but very slightly inclined to the right side, and having free motion in every direction."

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

Recherches Anatomico-Pathologiques sur la Médecine Pratique, ou Recueil d'Observations sur Maladies Aigües et Chroniques, faites à l'Hospice Clinique Interne de la Faculté de Médecine de Paris, et dans les autres Hôpitaux, sous les yeux de MM. les Professeurs Corvisart, Leroux, Boyer, Fouquier, Petit, Recamier, Laënnec, Jadelot, et autres Médecins recommandables. Par C. F. TACHERON, Docteur en Médecine de la Faculté de Paris, Médecin Civil et Judiciaire du Onzième Arrondissement, attaché au Bureau de Charité, &c. &c. Trois volumes in 8vo. Pp. 462, 518, et 632. Paris, 1823.

THE title of this interesting work shows the sources whence it is derived. Its character has been already given in our historical sketch of the progress of pathology. We now proceed to make our readers acquainted with its plan and execution. And here we may at once state, that its excel-

lencies are the result of the materials of which it is composed, while its defects arise from the faulty pathological arrangement which its editor has adopted.

The classification of the numerous facts with which M. Tacheron has presented us, by no means meets our approbation. He appears to have adopted too many of the crude and confined opinions, and sweeping generalizations, at present entertained by some of the French pathologists. The following is the order which he has followed:—1st, cutaneous phlegmasia; 2d, the phlegmasia of mucous membranes; 3d, phlegmasia of serous membranes; 4th, the phlegmasia of parenchymatous organs. Under the second of these divisions he has arranged pertussis, convulsive asthma, asphyxia, and as a consequence of inflammation of the bronchial membrane, he has placed hæmoptysis: he has classed scirrhus and cancer of the stomach, and hæmatemesis, after gastritis. According to him, gastro-intestinal phlegmasia embraces gastric derangement or ephemeral fever; bilious fevers; mucous, adynamic and ataxic continued fevers; and intermittents, remittents, and typhus. We find diarrhœa and dysentery under enteritis, hydrocephalus amongst the phlegmasia of the arachnoid, hydrothorax under pleurisy, and ascites under peritonitis; and amongst the inflammations of the brain we recognize apoplexy, palsy, convulsions, tetanus, hysteria, chorea, and hydrophobia. Now respecting these, we remark, that the very facts which he has so satisfactorily adduced do not warrant the situation in which he has placed the different species of fevers; nor have we a right to arrange pertussis, asphyxia, and nervous asthma, under inflammation of the bronchial membrane, because they occasionally evince, in their consequences, such derangement. As little reason have we for considering cancer, and scirrhus of the stomach, hæmatemesis, diarrhœa, and dysentery, as the same derangements as gastritis and enteritis; and granting them all to result from inflammatory action at their commencement, which would be too general a conclusion, the particular seats of these disorders bespeak for them a less general arrangement. Dropsical effusions, also, undoubtedly are the consequences, in a very great number of cases, of inflammation, in all its grades, in the membranes containing these effusions, of increased momentum or determination, &c.; but these disorders also frequently result from interrupted circulation in the veins, from the condition of the absorbent system, and from a relaxed state of the capillary exhalants, and of the serous tissues themselves. Without questioning the co-existence of several of the nervous derangements with inflammation of the brain, to which he has ascribed them,

or even their frequent origin from such a cause, we see no good reason for placing hydrophobia amongst the number. The reader will, moreover, be struck when he finds a very considerable proportion of the cases of fever minutely detailed, which evinced no symptoms during life of gastrointestinal disorder, and which presented no lesion, after death, in that situation.

The faults, therefore, of M. Tacheron's classification are those which result from too confined views respecting the nature of fever; from too general an application of the more frequent causes of disease in some instances; and from assigning, in others, the consequences of the disorder, as its cause, origin, and seat.

M. Tacheron introduces each of his different pathological classes, orders, and genera, with preliminary remarks; and he makes some interesting prefatory observations on the nature and relations of each particular disorder; and after detailing the history, symptoms, and treatment of the cases, with the appearances on dissection, he closes those relating to each disease with sensible reflections on the various interesting particulars which they present. Each case has the name of the *élève* attached to it who reported and attended to it, under the superintendence of one of the Professors.

It is evident that the nature of the valuable materials* of which this work is composed must prevent us from entering on its analysis. We shall, however, take occasion to refer frequently to it; and we may have some future opportunity of taking up some of its orders of disease, in connexion with some other production; and of thus making our readers more fully acquainted with its nature and merits. M. Tacheron has promised us a fourth volume from the same sources, containing a continuation of the disorders of parenchymatous textures, which he has only entered upon in his third volume. We think so highly of those now before us, that we shall receive with pleasure this continuation, or rather completion, of the work.

* The three volumes that have appeared contain upwards of eight hundred cases, with the appearances on dissection in most of them.

PART IV.

MEDICAL AND PHYSICAL
INTELLIGENCE:

BRITISH AND FOREIGN.

I. *Destruction of a great Part of the Spinal Marrow, with Contraction of the Arms, and perfect Motion of the Inferior Members.** A remarkable Case communicated by M. RULLIER, D.M. &c.

M. L.—, the subject of this case, was aged forty-four years. His size was small, his body thin, and his temperament eminently nervous. His faculties were early developed, and his mind cultivated at an early period of life. Being but young when left to his own discretion, he became addicted to those irregularities which result from an indulgence of the passions. At the age of thirty-four he first experienced pain when moving his arm, attended with pain and uneasiness at the top of the vertebral column. This indisposition, the first serious ailment which he had felt, became suddenly aggravated after several remissions; and in January, 1815, he entirely lost the use of it. After this the dorsal part of the spine became curved, and his shoulders, especially the right, became elevated.

M. L. consulted some of the most distinguished Physicians in Paris, who employed cauteries, moxas, and vesicatories, with little advantage. On the *fifth of October, 1822*, M. Rullier was called to attend him. He was then feeble and wasted. The size of his head formed a striking contrast with his small and emaciated body. His neck and extremities were long and thin. The vertebral column was sensibly curved. With the exception of the superior extremities, all the parts of the body enjoyed their voluntary motions. The patient walked about, and even shortly before his death could take several turns on the outer boulevards without fatigue. Borne up by his nervous activity, he assured M. R. that he felt strong.

The arms of this patient were contracted in a permanent manner, sometimes painful, and generally aching. The fore-arms were in a state of forced pronation, and the fingers in that of flexion. During sleep, the fingers were contracted so forcibly as to mark the skin in the palm of the hand. Notwithstanding the affection of the arms, M. L. could still sign his name in his official capacity, by a movement of the whole arm. The contraction of his arms appeared to be chiefly owing to the pectoral muscles, and the contracted parts preserved their sensibility. The hands were perfectly sensible to every alteration of temperature and to the slightest touch; and pain was excited in the arms by forcible impressions by external objects.

M. L. possessed his intellectual and moral faculties unimpaired. His sleep, however, was disturbed and broken, by difficulty of respiration and palpitation, occasioned by painful stitches darting through his chest. The

* M. Magendie justly remarks, that this is one of the most remarkable facts which pathological anatomy has furnished. It shows how much we have yet to learn respecting the functions of the nervous system.

thorax appeared to preserve only a part of its motions : cough was frequent and difficult, and the expectoration abundant and like cream. Hectic fever, with increase of the frequency and strength of the pulse, supervened, and was accompanied with an aggravation of the symptoms more immediately referrible to the chest and lungs ; the remissions of the fever were, however, marked, and attended with comparative ease. The bowels were obstinately constipated. Violent pains were felt in the lumbar region and in the dorsal curvature, and the breathing became more oppressed with the accession of the hectic paroxysm.

Erections continued, as they had been during his illness, and, indeed, through life, frequent, and it was only shortly before his dissolution that the patient had ceased to indulge in the reproductive act ; the desire of which, with the requisite energy of the parts, continued almost until his death.

The treatment which was employed before the attendance of M. Rullier had checked a gastro-intestinal irritation which had affected the patient. M. R. found him in a state of pulmonary consumption, supervening to the affection of the bowels, which he could not retard. And on the 31st of October, fifteen days after M. R. first saw him, he sunk under his complicated disease.

Dissection.—The body, opened thirty-six hours after death by MM. Piedagnel and Leconteux, in the presence of M. Magendie, who was kind enough to assist me at this operation, was not as yet visibly altered, although it had remained in a warm place. Its emaciation evinced complete marasmus. The breast and superior members were on this account particularly remarkable. These last were, if I may use such an expression, glued to the body, and were contracted, as was the case before death. The legs and the feet were slightly œdematous.

The vertebral column, the particular object of our examination, offered in the upper half of the dorsal region a slight salient curvature behind and to the right, and which raised the corresponding shoulder. The rest of the back was well formed ; the breast, sufficiently straight, appeared to be still more so, in consequence of the arms and the shoulders being raised and brought forward.

The adipose cellular tissue had entirely disappeared. All the muscles were lank and thin : those in the lumbar region were softened and of a deep red colour. The psoas muscles presented the same colour, and were as if in a state of solution. They were not entirely suppurated nor inflamed, and we considered to what point this alteration explained the severe pains which the patient had suffered in the lumbar region, and principally to the right.

The brain was firm, very sound, and contained a remarkable quantity of serum in the four ventricles, and this serum appeared to have the power of following the erection of the body into the cavity of the spinal arachnoid ; at least, we could not establish the existence of a cul-de-sac formed by this membrane, and which closes on this side the fourth ventricle. Neither did the valvule of Vieussens exist. Nothing that regarded the cerebellum appeared to be worthy of remark, nor any thing that could be united with the prodigious generative activity that had distinguished the patient.

The arachnoid of the ventricles was clearly distinguished : it presented a simple increase of thickness, which did not alter its transparency.

The fibrous canal of the spine was laid bare throughout its whole extent, by removing the spinous apophyses and plates of the vertebræ ; the marrow suffered no sort of compression in its canal ; only it contorted itself as the spine did in the dorsal region. The cavity of the arachnoid contained a remarkable quantity of serum ; beneath part of this membrane, united to the marrow, we found the membrane belonging to the latter covered with a

great number of red vessels, arterial and venous, strongly injected with blood.

The vertebral marrow, examined with care, in its place and by its posterior face, appeared to us in its natural state, from its origin as far as the fourth pair of cervical nerves. The two inferior thirds of its dorsal part were equally sound; but between these two parts, viz. for about six or seven inches in length comprised between the two inferior thirds of the cervical region and the upper third of the dorsal region inclusively, and corresponding to the eighth or ninth pair of nerves, this part displayed the most remarkable alteration: it was soft to such a degree of fluidity that the canal formed by the dura mater appeared to be full of a real liquid, which followed the direction of its gravity up or down according to the position of the body; but this liquid, which thus doubly inflated the covering of the marrow, stopped precisely at those parts of this organ which remained in their natural state. A small opening being made in the dura mater immediately let a quantity of this fluid run off: when the membrane had been cut through, the spinal marrow was seen covered with its proper membrane; it was of a reddish grey, and extremely soft; it presented a sensible fluctuation,* and the opening of its membrane allowed a liquid mixed with small flakes of the medullary matter to run out. We afterwards made a large opening, and a longitudinal incision, in this part of the marrow, which presented to our view an elongated cavity, filled with a sort of greyish light red fluid, in which a great number of red and extremely thin capillary vessels were dispersed.† The medullary bands connected with the corresponding roots of the spinal nerves could scarcely be distinguished on the anterior part of this altered portion. On the left side, the interrupted band was no longer marked, for about an inch and a half, except by lenticular pieces of the medullary matter placed one after another in the line of its direction: this disposition appeared to us to have entirely resulted from the running out of the matter which had existed in this place, in consequence of a small accidental perforation made in the middle part of the opening, or of the treatment the marrow had received. The marrow, detached and taken from its canal, could be examined by its anterior region. Here the alteration of which we have spoken was much less sensible; the difference was not superficial, was not to be remarked from the exterior, and the discharge of the matter from the incision that had been made had diminished the volume and removed the appearance of fluctuation; the medullary bands corresponding to the reticulation of the origin of the anterior branches of the spinal nerves were apparent, and offered no interruption throughout their whole length, with the exception of the left, which, as we have already said, was altered; they were traced throughout the whole extent of the marrow as far as the medullary tissue, whence they have their origin.

An attentive dissection showed us that the disposition and structure of the origin of the marrow and its superior part, as far as the fourth pair of cerebral nerves, presented nothing particular. Behind, the inferior part of

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thorax appeared to preserve only a part of its motions : cough was frequent and difficult, and the expectoration abundant and like cream. Hectic fever, with increase of the frequency and strength of the pulse, supervened, and was accompanied with an aggravation of the symptoms more immediately referrible to the chest and lungs ; the remissions of the fever were, however, marked, and attended with comparative ease. The bowels were obstinately constipated. Violent pains were felt in the lumbar region and in the dorsal curvature, and the breathing became more oppressed with the accession of the hectic paroxysm.

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the fourth ventricle and the posterior pyramids—before, the pyramidal and olivarian eminences, displayed their known configuration. On examining carefully the origin of the first spinal nerve, we convinced ourselves that the most inferior reticulations of its origin evidently corresponded to that portion of the marrow which was destroyed.

The structure of all the part situated above the fourth pair of cerebral nerves was sound; the medullary substance had its ordinary whiteness and consistency; but below this point this consistency and this whiteness suddenly changed. It appeared that the marrow was converted into a cellular substance, distended with a pale rose-coloured serum, as far as the sixth pair of cerebral nerves, a place in which there no longer existed but a broad cavity, of which the sides were only formed by the vascular and serous membranes of the marrow and the remains of the medullary matter. This disorganization was remarkable as far as the fourth pair of dorsal nerves; but this alteration penetrated like a cave into the midst of the medullary substance, which appeared there with its natural properties.

The eight lower inches of the organ showed no alteration. Some nerves were dissected and followed, those of the brachial plexus, in particular, as corresponding to the disorganization; they, as well as their ganglions, were found without any alteration. The lungs, apparently soft and crackling in their anterior part, were not sound; they adhered in their posterior part to the costal pleura in too loose a manner. The left lung contained in its superior lobe some thin and dispersed tubercles; the posterior edge was filled with blood. The right lung, more diseased, presented in the same region the same aspect; it had there the appearance of hepatization, and presented many reunions of suppurated tubercles, of which some swellings were ossified.

In the belly, the stomach, sufficiently dilated, was in a healthy state; so also were the other viscera, with the exception of some parts of the intestines, of which the different membranes, being very much injected, were of rather a dark red and slightly livid. Some blackish spots, externally visible, corresponded to some small denticular ulcers of the corresponding mucous membrane.

The bladder was small and thick, but sound.

II. *Remarks by M. MAGENDIE on the foregoing Case.*

To how many reflections does the preceding fact give rise! A man enjoying, almost to his last hour, great moral activity, powerful generative faculties, a free movement of his inferior members, and sensibility in his upper ones, had probably suffered for a long time the loss of above a third of the nervous matter of his spinal marrow; the communication between the cerebral and dorsal part of this marrow was, if such an expression may be allowed, no longer maintained except by the membranes; for it has been seen that there only remained a thin layer of white substance scarcely two lines in breadth, and very probably altered in its structure. The cavity from whence the medullary matter had disappeared was filled with serum. There was, therefore, an almost complete isolation of the superior and inferior parts of the marrow, and that for above six or seven inches in length; yet the will exercised its power over the inferior members; the imagination stimulated the genital organs, and these transmitted to the sensitive brain the lively emotions of pleasure.

These two parts of the marrow thus persisting in keeping up their communication is worthy of all our attention. Some motives for a curious experiment may be deduced from it. The great sympathetic nerve was without doubt the medium of it; for all sections, or even all compressions of the marrow, intercept the determination of the will relatively to the motions, and render the parts which receive their nerves insensible from the point

of the marrow which is below the part compressed. The thin layer of medullary substance, and the proper membranes of the marrow, therefore remain. If it be imagined that it is the stratum of nervous matter, it must be thought very extraordinary, that notwithstanding its small breadth and thickness, it performs this function as well as the marrow in its sound state, and that there has not been at least some diminution, either in the rapidity, or, if I may thus speak, in the perfection of the transmission.

If, on the contrary, it be found that so narrow a medullary stratum cannot be sufficient to explain the phenomena, it must necessarily be inquired if the vascular and serous membranes would not be proper for the nervous transmission. Up to the present time, it is true, nothing has afforded cause for suspicion, but on the other hand nothing formally opposes it: here is a new and very important subject of inquiry. The conjecture is here the more allowable, as in the case which fell under our observation, the membranes of the marrow were perfectly sound.

With regard to the motion of the heart, the fact of M. Rullier is not less curious; for after the investigations of Le Galois, a considerable diminution of the mass of the spinal marrow ought so to diminish the force of contraction in the heart, that the blood would not be able to arrive continually at the lower extremities; and yet the circulation was perfectly maintained.

The contraction of the upper members, with a continuance of sensibility, deserves also to be remarked; for the posterior portions of the marrow, where the sensibility particularly resides, had disappeared, from all the pairs of nerves which supply the brachial plexus. Thus the sensibility of the arms could not have its ordinary source, viz. that which is connected with the posterior roots. Reasoning after my experiment, there remain, therefore, the anterior roots which give the entire movement, but which, as I have observed, are not incapable of sensibility. Now these roots extended as far as the medullary stratum of communication, and, in this point of view, there will be no difficulty in explaining it, if it be supposed, which is not impossible, that during life a thin layer existed to the left, as one existed to the right. But a circumstance of greater interest is that the anterior roots, as I have recently discovered in the piece preserved, had lost their medullary matter, and were reduced to their neurilema, as is the case with the wasted optic nerve. The posterior roots, on the contrary, had retained their nervous matter as far as their junction with the membranes of the marrow. Every where else, except in that part of the marrow which was altered, the anterior and posterior roots alike presented the medullary matter.

This pathological disposition of the anterior roots of the brachial nerves is well connected with the complete immobility of the arms; but it with difficulty allows a belief that they were the agents of the sensibility. Why, on the contrary, should not the posterior roots which, far from being wasted, were in their ordinary state, and consequently were filled with the medullary substance, be the organs through which the arms of the patient preserved their sensibility, and occasionally even suffered an acute pain?

This again leads us to conjecture that the immediate envelopes of the marrow might be the conductors of the sensibility, or be themselves sensitive parts. It has been seen, in the experiments which I have before mentioned, that a simple contact of the serous membrane of the marrow occasions an acute pain, if the posterior part of the organ be touched. I, together with M. Dupuy, have recently established this interesting fact by operating on a horse.

An anatomical disposition which is extremely visible on the piece I have preserved, is that the interior cellular tissue of the marrow, in the cellules of which the medullary matter is probably deposited, established a solid connection between the anterior and posterior part of the marrow: it was the layers of this tissue that the blood-vessels ramified.

To sum up every thing, we shall repeat that the observations of M.

Rallier show that we have still much to learn with regard to the functions of the spinal marrow. This should induce persons engaged in pathological anatomy to lose no opportunity of examining this part, and even of preserving it, if it present any irregular formation.—*Journal de Physiologie, Avril, 1823.*

III. On the Cure of Intermittents by Frictions with the tartarized Antimonial Ointment on the Epigastrium.

During the winter of 1815, Dr. Pommer had occasion to treat numerous cases of intermittents occurring in the army of Wurtemberg, cantoned at that time on the Loire and Allier. He frequently found the cinchona to fail in producing its usual effects, and observed that the fever generally disappeared on the eruption of pimples or pustules on any part of the body. Taking advantage of this observation, he was induced to try the effects of artificial eruptions in its cure. With this intention he employed the common tartar emetic ointment, and prescribed it to be rubbed upon the abdomen and epigastric region. The first two individuals whom he subjected to this treatment recovered immediately upon the maturation of the pustules which were thus produced. This induced him to use the same means in a great number of cases then under treatment, and in those which subsequently occurred, and in all the cases with similar success. Dr. P. employed the same mode of cure in those varieties of agues which were complicated with nervous symptoms with the same benefit.—*Journ. der Practischen, Heilk. 1823.*

IV. Experiment on the Effects of the Ergot of Rye.

By M. CORDIER, M. D.

M. Cordier, being desirous to ascertain the mode of action which this substance exercises, swallowed, on the 16th of April, 1822, two drams of it, at seven in the morning, when quite fasting. He found it to possess a particular but obscure flavour, durable, and leaving an acrid and rather nauseous sensation after it. He experienced no peculiar feeling until two hours afterwards, when he felt a sense of weight in the stomach, attended with a disposition to vomit. At ten o'clock an eructation brought up a mouthful of limpid, very acid liquid, tasting strongly of the ergot. After this was rejected, he was entirely freed from the disagreeable sensation felt at his stomach, but its passage over the tongue excited a copious discharge of saliva. At eleven o'clock he breakfasted, with little appetite, on bread and milk: soon afterwards he experienced a desire to vomit, and about half an hour subsequently he rejected, without effort, and at once, all that he had taken. At noon he vomited again, but with greater efforts, and rejected some mouthfuls of tenacious mucus. He perceived no traces of the ergot in the rejected matters. After midday he felt a little lassitude and uneasiness; the odour of the perspiration had become somewhat sour, and he felt rather weaker than before the vomiting. He dined in the evening in his usual manner, but was still annoyed by the flavour of the ergot. The vomiting occasioned by this substance is not violent, and causes but little uneasiness; for he did not observe any change on the state of the circulation, or of the breathing and other functions.—*Journ. Gen. Avril, 1823.*

V. Use of Moxa in India.

In a letter which we have received from George Henry Davies, Esq. Surgeon to one of the Native Corps in the Bombay Presidency, he states that the moxa is a favourite native remedy, and that he has witnessed in numerous instances its good effects in cases of rheumatism and paralysis; and he thinks it generally preferable to issues, setons, and perpetual blisters, in cases where those curative means are usually prescribed.

VI. *Army Medical Officers' Funds for the Benefit of Widows, &c.*

We have much pleasure in acquainting our readers with the flourishing condition of these societies. It would appear from their report laid before the eighth annual meeting held on the 16th of May, that the yearly revenue of the Society for the Benefit of Widows of Medical Officers, amounted to upwards of £3800, and their accumulated fund to very nearly £29,000; and that the annual subscriptions, &c. to the Medical Officers' Benevolent Fund was £637, and their invested fund about £2000. After these satisfactory accounts were laid before the meeting, the members and their friends, to the number of above 100, dined together at the Thatched-House Tavern, Sir Everard Home, Bart. in the chair. Amongst those who were present not belonging to this department of the army,—a department to which the country generally, and the state of medical science in it, are indebted—were Sir H. Halford, Dr. Baillie, Dr. Mason Good, the Master of the Apothecaries' Company, Mr. Brodie, Mr. Chantry, Mr. Wilkie, and several other eminent individuals.

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

A Series of Elementary Lectures on the Veterinary Art, wherein the Anatomy, Physiology, and Pathology of the Horse, are essayed on the general Principles of Medical Science. By Veterinary Surgeon Percival, of the Royal Regiment of Artillery. 8vo. pp. xxxvi. 380. London, 1823.

The author of this work appears to be well informed in the principles of medical science. He has viewed, in a very satisfactory manner, the physiology and pathology of the horse, in relation to the laws which regulate the human economy, and, indeed, animal bodies generally. As far as these recommendations may entitle it to regard, and as far as we are capable of judging of its merits generally, we consider it a work of considerable excellence.

FOREIGN.

Anatomic du Cerveau, contenant l'Histoire de son Développement dans le Fœtus, avec une Exposition Comparative de sa Structure dans les Animaux. Par Frédéric Tiedemann, Professeur à l'Université de Heidelberg, Membre des Académies des Sciences de Munich et de Berlin, Associé étranger de l'Institut: traduite de l'Allemand avec un Discours Préliminaire, &c. par A. J. L. Jourdan, Docteur en Médecine, &c. &c. Avec 14 planches. 8vo. pp. 325. Paris, 1823.

We take the earliest opportunity of making our readers acquainted with the publication of this translation of Tiedemann's important work. The references which have been so frequently made to it will have convinced them of its excellence. The translation is well performed, and the preliminary observations by M. Jourdan are judicious. The plates are engraved on stone, and well executed.

LITERARY INTELLIGENCE.

Mr. Herbert Mayo has in the press a second number of his Anatomical and Physiological Commentaries.

Mr. Bayfield, Cupper to Guy's Hospital, will very shortly publish a Treatise on Cupping, comprising its History, a Description of its various Instruments, and Practical Directions for its Performance.

Shortly will be published, the New Mercantile Assistant and General Cheque Book, containing Nine copious Sets of Tables relative to the Funds, Life Annuities, &c. &c.

THE METEOROLOGICAL JOURNAL,
From the 19th of MAY, to the 20th of JUNE, 1823,
 By Messrs. HARRIS and Co.
Mathematical Instrument Makers, 50, High Holborn.

May.	Moon.	Rain Gauge.	Therm.			Barom.		De Luc's Hygrom.		Winds.		Atmo. Variation		
			9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	9 P. M.	10 P. M.
20			55	61	51	29	49	29	44	67	70	SSE	SE	Sho.
21			45	63	53	29	39	29	50	65	71	SW vr.	S var.	Fine
22		.02	55	62	52	29	50	29	61	73	75	SSW v.	SW	Sho.
23		.01	56	63	49	29	57	29	71	74	71	SW	W var.	Sho.
24	☉		53	64	55	29	68	29	62	85	75	SW	SSW	Clo.
25			60	67	50	29	46	29	48	78	65	SSW	SSW	Clo.
26		.03	60	71	50	29	50	29	61	67	66	SSW	NNW	Fine
27			57	70	50	29	74	29	77	70	71	NNE	N	Fine
28			60	67	50	29	82	29	87	65	67	NE	NE	Fine
29			53	65	50	29	92	29	94	61	60	ENE	E	Fine
30			60	71	50	29	97	30	00	63	63	SE	S	Fair
31			59	73	51	30	01	30	00	68	65	E	E	Fine
1	☾		69	78	60	29	95	29	86	67	65	S	SSW	Fine
2			71	77	50	29	71	29	45	65	81	WSW	SW	Fine
3			61	73	50	29	41	29	35	71	65	SW	SSW	Fine
4		.09	62	67	48	29	26	29	28	70	68	SW	SW	Fine
5			61	65	46	29	31	29	44	67	65	SW	SW	Fine
6			60	68	49	29	62	29	83	69	68	W	NW	Clo.
7			62	67	46	29	90	29	76	68	71	SW	SW	Fair
8	☾	.04	65	68	47	29	73	29	74	67	73	SSW	WSW	Fine
9			67	71	53	29	74	29	75	70	78	W	W	Fine
10			58	67	54	29	76	29	84	69	73	NW	NNE	Fine
11			57	65	50	29	87	29	86	70	73	NNE	NNE	Fine
12			64	69	53	29	74	29	78	68	73	NNE	E	
13			67	73	55	29	66	29	64	65	70	N	NNE	
14			67	76	63	29	70	29	72	63	69	N	NE	Fine
15	☽		64	75	62	29	80	30	00	64	67	N	NE	Clo.
16			64	76	63	30	06	30	10	64	65	N	ESE	Fine
17			65	74	50	30	10	30	06	64	68	N	NE	Fine
18			56	65	49	30	08	29	95	70	69	N	NNE	Clo.
19			60	65	55	29	94	29	90	68	69	NNE	N	Clo.

The quantity of Rain that fell in the month of May was 1 in. 7-100ths.

NOTICE TO CORRESPONDENTS.

Communications have been received from Dr. Sutton, Mr. Haden, Mr. King, Mr. Perry, Mr. Snell, and from a Physician, a friend of the Editors.

* Communications are requested to be addressed (post paid) to
 Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 116. AUGUST 1, 1823. VOL. XX.

HISTORICAL SKETCH OF THE PROGRESS OF
MEDICINE,

AND OF THE SCIENCES CONNECTED WITH IT,

During the first Six Months of the Year 1823.

(Concluded from page 66.)

MATERIA MEDICA.—But few actual additions have been made to this part of medical science within the period to which this essay refers. We have, however, several observations presented us respecting those remedies which have been recently introduced into practice, confirming former experience as to their efficacy in those diseases against which they were first employed, and evincing their beneficial effects in disorders for which they had not been previously prescribed.

Iodine has obtained a considerable share of reputation since we directed the attention of the Profession in this country to its use in bronchocele.* Since we last had occasion to notice its effects, Professor BRERA, of Padua, has published the results of his experience respecting its efficacy.† We are indebted to Dr. JOHNSON‡ for the following abstract of the Professor's clinical observations respecting it, which we shall place before our readers as an additional inducement for them

* REPOSITORY, Vol. XIV. passim.

† Saggio Clinico sull'Iodio, e sulle differenti sue Combinazioni e Preparazioni, &c. &c. Padua, 1822.

‡ Medico-Chirurgical Review, March, 1823.

to put this substance to the test of farther experience. Dr. COINDET, to whom we are indebted for introducing this remedy into practice, had stated, that the ill effects which occasionally followed its internal use were entirely obviated by its external application. "Professor Brera, however, informs us that it can be employed internally with equal safety, and with greater effect, except in such cases as require its topical agency. The following are the formulæ most recommended by Professor Brera :—

" 1. *Tincture of iodine*.—Made by dissolving 48 grs. of pure iodine in an ounce of alcohol (at 35). This is the preparation most frequently used at first by Dr. Coindet, who, as well as Brera, recommends it being used *fresh*, as it is liable to decomposition in a few days. The dose is from five to twenty drops for adults, three times a day. Twenty drops contain about one grain of iodine.

" 2. *Pills of iodine*, made by forming one grain of iodine into two pills, with elder-rob and liquorice powder—one to be taken morning and evening.

" 3. *Iodine ointment*, made by rubbing up a dram of pure iodine with an ounce of lard, or half a dram of hydriodate of potass with an ounce and a half of lard; the former in the quantity of a scruple, the latter about the size of a filbert, rubbed on the part.

" 4. *Solution of hydriodate of potass*.—This preparation is stated to be preferable to any of the foregoing, producing their good effects without their inconveniences. It is formed by dissolving 36 grains of the hydriodate in an ounce of distilled water, and is given in the same dose as the tincture.

" 5. *Solution of the ioduretted hydriodate of potass*, formed by dissolving 36 grains of the hydriodate and ten grains of pure iodine in ten drams of water. This is said to be a still more efficacious preparation than the preceding, and requires to be given in small doses, viz. five or six drops, three times a day, to begin with.

" The following precautions are to be attended to during the administration of iodine :—not to combine it with substances likely to decompose it, and not to give it when the stomach is loaded, but in the morning, a couple of hours before or after dinner, and in the evening. Our author farther recommends the occasional suspension of the medicine, on account of the sometimes sudden supervention of unpleasant effects from it, and to give a dose of *magnesia* on the day of its suspension, with the view of clearing the *primæ viæ*. The liquid preparations may be given in any vehicle. Coindet usually employed syrup and water."

" When iodine is cautiously and gradually introduced into

the system, it affects it in a general manner, analogous to that of mercury, but very different in the consequences. The first, and what may be called the *salutary* effects of iodine, are an increase of appetite and of the strength of the pulse; whenever these are produced, we must watch with the greatest care that these salutary limits are not exceeded, and the pernicious consequences of an over-saturation of the system induced. The complete impregnation of the system is indicated by the change of the above-mentioned increased action of the pulse into decided frequency and quickness — by a sense of heat and irritation of the fauces — pain of the orbits or eye-balls, with obscured vision — pain of the internal ears and gums (with occasional salivation), headach, restlessness, loss of sleep, with swelling and pain of the diseased organs (*e. g.* thyroid and other glands), and an increase of appetite sometimes to a degree of voracity. In some persons the submaxillary glands become painful and swollen, and a similar state of the mammaræ, *with eventual diminution of their natural volume*, takes place in some females. When given from the first in an over-dose, iodine produces a strong burning sensation in the fauces, which frequently extends down the œsophagus to the stomach and whole intestinal canal. In a still higher degree of saturation (or *iodization*, as the author calls it) of the system, to the above-mentioned symptoms succeed very considerable emaciation even in the space of a few days, excruciating pains in the orbits and eyes, with great defect of vision, and similar pains in the diseased parts; the strength vanishes; neuralgic pains are experienced in the stomach, chest, bowels, &c. the sleep entirely fails, and there is obstinate palpitation of the heart, with tremors, convulsions, or palsy of the extremities; to the excessive appetite succeeds complete anorexia, and the factitious disease finally terminates life, in a short time, by universal inflammation of the nervous and vascular systems (*profunde angioitidi e neuriditi*).

“ Upon the appearance of the milder class of symptoms above-mentioned, the immediate suspension of the medicine (which ought always to be done) sometimes is found sufficient to put a stop to them in a few days. For allaying these deleterious effects, rigorous regimen, copious mucilaginous drinks, and the tepid bath, are recommended; and where the topical affection of the goître, or other tumors, runs high, fomentations, poultices, leeches, &c. are prescribed; and general bleeding is advised where there exists a high phlogistic state of the whole system.

“ As these symptoms sometimes show themselves all at once, we ought to be cautious in not too hastily increasing

the dose in cases wherein no obvious effects are produced. After the bad symptoms are allayed, the medicine is to be repeated with the same precautions as in the case of mercury and arsenic."

Dr. Coindet has given the following explanation of its operation on the system:—"Iodine is a stimulant; it gives tone to the stomach and excites appetite; it neither acts upon the bowels nor kidneys; produces no perspiration, but exercises its action upon the generative system, especially the uterus. If given in a certain dose, and continued for some time, it is one of the most active emmenagogues with which I am acquainted; it is, perhaps, from this sympathetic action, that it so frequently cures the goître." Again—"The experience of two years upon more than two hundred patients, has proved to me, that this remedy is one of the most energetic stimulants we know of the lymphatic system; and the variety of diseases in which I have employed it (such as goître, scrofula, enlarged glands of the breast, certain affections of the uterus, some cases of dropsy, &c.) is only apparent, since the whole of these diseases are only lesions of the same system."—(Dr. Coindet's Memoir, as quoted by Dr. Johnson.)

We refer our readers to the March Number of this Journal for an account of the experience of Dr. BARON as to the efficacy of iodine in tuberculous disorders and in pulmonary consumption, as detailed in his recent illustrations of these derangements.

The effect of *nux vomica* as an energetic stimulant of the voluntary nervous system, and, consequently, as a remedy in chronic paralysis, has been farther shown by M. SEGALAS,* and by the experience of several Practitioners.

The efficacy of *charcoal* in obstinate constipation of the bowels has been occasionally asserted by Physicians and writers of eminence. Dr. DANIELL, of the United States, has lately published cases illustrative of its effects in this species of disorder.† In the first case which occurred to this Physician, "having adopted the usual treatment of bleeding, warm bath, and mercurial purges, aided by jalap, castor-oil, with other active articles of this kind, blisters, &c. without success," he conceived that a favourable opportunity had now offered of testing the efficacy of charcoal. "I gave," he has informed us, "a tablespoonful of it every half-hour, and at the expiration of about seventeen hours, my

* Magendie's Journal for October, 1822; and REPOSITORY for January, 1823.

† Philadelphia Journal, No. IX. p. 119.

patient's bowels were freely evacuated. The discharges, which consisted chiefly of a thick mucus, were coloured by the charcoal. This medicine was then discontinued, and castor-oil substituted — the latter, however, evacuating but partially, I had recourse again to the charcoal, which was continued until the patient recovered. My observations since have convinced me of the necessity of continuing the charcoal until the discharges are no longer marked by the presence of slime or mucus, which I have found to abound in very considerable quantities, in all the cases of constipation which have fallen under my care. And, I think, the existence of this matter in the intestines may explain the cause of failure, not only of powerful enemata, but of cathartics to evacuate them. Lining, as it most probably does, the chief or whole extent of the bowels, it protects their surfaces from the influence of the medicines. The charcoal probably exercises a chemical influence upon this matter. The evacuations produced by the charcoal appear to be composed chiefly of this article, and the mucus or slime intimately blended.

“ Since this case, I have used the charcoal in fourteen or fifteen other instances, and always with complete success. In this disease, the sufferings of the patient are usually extremely great, and I have occasionally, since adopting the charcoal, attempted to relieve them by other cathartics which operate more speedily, but I have invariably failed, and was afterwards compelled to have recourse to that remedy — sometimes, however, not until the third and fourth days of the disease, and always with decided advantage. Further experience has convinced me, that the most speedy, as well as most certain relief, is to be obtained from the free use of charcoal. If it does not wholly relieve, it always very much mitigates the pain in six or eight hours from the period of its first administration — and within my observation, the patient has always been entirely composed before the operation of the medicine upon the bowels.”

“ To many, the tardy operation of this medicine may appear as a serious objection to its use. It was formerly so to me, but since I have been convinced of its certain efficacy, and that although it may not act upon the bowels in twenty-four hours even after its first exhibition, yet that it will in one-third of this time very much relieve, if not wholly remove the pains, &c. This objection appears comparatively unimportant — for what avail a few hours in the cure of a disease, if we can control the sufferings of our patient, and afterwards certainly relieve him ?

“ In relation to the dose of this medicine, the rule which I have pursued is to give it as freely and as frequently as the

stomach will allow. The quantity required is considerable. It has a happy influence in lulling the irritability of the stomach, when nothing else which I have used would control the nausea and vomiting of the patient; thus fulfilling the double intention of first alleviating a very distressing symptom, and then removing the disease itself. I usually give from one to three table-spoonsful of the charcoal every half-hour or hour: whenever the stomach becomes overcharged with the medicine, the excess is thrown off, and the stomach is again quiet. I give it in lime water, milk, or water alone — the vehicle having appeared to me unimportant."

Mr. BLACKETT has directed the attention of his professional brethren to the more frequent use of the *belladonna* in several disorders which are characterized by excitement of the nervous system. The observations of this gentleman are calculated to bring this active remedy into more general use, and to lead to its adoption in the treatment of some ailments in which it had previously received an insufficient and an ill-conducted trial.*

The efficacy of samphire, *crithmum maritimum*, as a vermifuge, has been contended for,† and its chemical constitution investigated, by Dr. LAVINI, of Turin. Dr. BRAYER has also given an account of a vegetable anthelmintic, which is said to be employed with uniform success in Abyssinia for tape-worm.‡ M. Brayer, who resided a considerable time in Turkey, obtained this substance from an Armenian merchant, and prescribed it to a patient in Constantinople, who had been tormented for many years with tænia. After having macerated about five drams of this substance in twelve ounces of water, and taken half of the infusion while fasting, the patient experienced nausea, with a disagreeable flavour of the remedy: about an hour afterwards he took the other half of the infusion, and went to bed. He felt pains in his bowels, and, after frequent evacuations, discharged the tænia dead and entire. Its thickest extremity was the last part which came away. Several mucous stools followed the discharge of the worm, after which the patient perfectly recovered. M. Brayer procured some of this substance, which he gave to M. KUNTH,|| a botanist intimately acquainted with intertropical plants, who considered it to belong to a new genus of the family of the *rosaceæ*, nearly allied to the genus

* REPOSITORY for June, 1823.

† Archives, Mars, and REPOSITORY for May, 1823.

‡ Archives Gén. Mars, 1823.

|| The celebrated describer of the new plants discovered by Humboldt in New Spain, &c.

agrimonia, to which he has applied the name *brayera*, and that of *anthelmintica* to the particular species to which M. Brayer's observation relates.

The *classification of remedies* has been made the subject of inquiry by M. CAP, a scientific druggist at Lyon, in a memoir which obtained the gold medal from the Medical Society of Paris.* M. C. has divided his treatise into three parts: in the first he investigates the causes which have retarded our knowledge of the operation of the articles of the *materia medica*; in the second part he maintains that the present state of science does *not* authorize us to arrange medicines according to what we as yet know respecting the rationale of their action; and in the third he endeavours to point out the course that ought to be pursued in order to obtain the materials for such a basis of classification. M. Cap has very properly considered that the epoch has only just commenced wherein the Physician endeavours to trace the effects of remedies on the animal economy in an enlightened and philosophic manner; and from a knowledge of those effects, to apply them to the removal of disease. Formerly medicines, with a few exceptions, were generally employed in an empirical manner, without a strict reference to the exact state of derangement at the time of exhibition, and often with no other evidence of utility than a loose analogy in their favour. But the spirit of inquiry into this most interesting and most important subject is now abroad amongst all classes and members of the Profession; his inspiration is not limited to a single country, nor his voice confined to one language.

PHARMACY.—In this department of knowledge there are sufficient materials before us, could our limits permit us to bring them fully before our readers. The scientific contributors to the *Journal de Pharmacie*, published at Paris, and the *Transactions of the Society of Pharmacy* of the same city, have contributed materially to the advancement of this very important branch of medicine. M. GALLARD has directed attention to the necessity of preparing the *hydriodate of potash* with recent lard;† M. CAILLOT has given a new process for the preparation of the same substance;‡ and M. BAUP has made some interesting observations on the properties of, and on the mode of preparing the hydriodate

* *Mémoire sur cette Question: Déterminer si, dans l'état actuel de nos connaissances, on peut établir une classification régulière des médicamens, fondée sur leurs propriétés médicales?* Lyon, 1823. 8vo.

† *Journal de Pharmacie*, Novembre, 1822.

‡ *Ibid.* Octobre, 1822.

of potash, both simple and iodurated.* M. PESSINA, of Milan, has published a new process for the preparation of the *hydro-cyanic acid*, by which he professes to obtain this substance in its most pure state. For an account of the method which he adopts, and which is more economical than those heretofore employed, we must refer our readers to the January Number of the *Journal de Pharmacie*.

An excellent memoir on the preparation and classification of *extracts*, by M. RECLUZ, has been published by the Society of Pharmacy of Paris.† M. R. has given a new arrangement of these preparations, founded on their active principles. He has divided them into six classes: namely—1st, *Alkaline extracts*; 2d, *resinous extracts*—*a.* the resinous properly so called, and, *b.* those that are less decidedly so; 3d, *bitter extracts*—*a.* bitter extracts that are strictly such, *b.* cathartic bitters, *c.* tannine or astringent bitters; 4th, *saccharine extracts*; 5th, extracts consisting chiefly of *osmazome*; and, 6th, extracts of a *compound* nature, whose immediate principles are so equally balanced that they evince no one active property that can be distinguished above the others. M. R. has appended an useful table to his essay, exhibiting, in columns, the name of the various substances thus prepared, the part of them used, either in a fresh or dry state, in the preparation of extracts, the vehicle employed, the means resorted to in obtaining each of them, the proportion of extract which each article yields, and the consistence of the extract at the end of the process, and after having been kept a twelvemonth.

M. CAVENTOU‡ has directed the attention of French pharmacutists to the application of steam to this department of pharmacy.

A new method of obtaining the *submuriate (proto-chlorure) of mercury*, in the state of an impalpable powder, has been promulgated by M. HENRY, jun.;|| and M. DZÓZIEZ, jun. has directed attention to a different and improved process of procuring the *nitric ether* from that usually employed. We refer those who are desirous to become acquainted with the details of the modes of preparation to which we have referred to the Numbers of the work already quoted: our limits and our inclination prevent us from entering into particulars which, judging from the taste and pursuits of the majority of the Profession, might but little interest them.

SURGERY.—As many of the observations which we have already adduced, connected with physiology and pathology,

* Journ. de Pharm. Janvier, 1823.

† Ibid. Fev. 1823.

‡ Ibid. Decembre, 1822.

|| Ibid. Dec. 1822.

apply equally to chiralurgical therapeutics; and as we are not aware of any important additions having been made to surgical pathology, within the period to which we limit this sketch, that are applicable to this art alone, we shall at once proceed to take a cursory view of its practical improvements.

Commencing with the surgical treatment of *aneurism*, the ligature of the arteria innominata, by Dr. MOTT, first attracts our attention. "The patient, a sailor, aged fifty-seven, was admitted into the New York Hospital, with a catarrhal fever, and a swelling of the left arm and shoulder. These affections partly yielded to treatment, when he fell by accident upon his arm and shoulder, in consequence of which a violent pain and swelling in his right shoulder followed, and soon after a slight pulsation was detected under the clavicle. On the 3d of May, he felt a pain as if something had rent, and the tumefaction immediately increased to a great size, and the pulsations became more distinct, particularly on the inferior side of the clavicle. He became very feeble, and had a violent cough. On the 7th of May, Dr. Mott called in Drs. Post, Kissam, and Stevens, and it was agreed to tie the subclavian artery, and if it was found affected, to put a ligature on the common trunk. On the 11th, the operation was proceeded with, the patient having previously had seventy drops of tinct. opii. Two incisions were made, one in the direction of the clavicle, and the other along the sterno-cleido-mastoideus. The carotid was laid bare, and traced towards the subclavian, which was found so diseased that they had no alternative but to tie the innominata. They accordingly carried the incisions deeper, and separating the recurrent and the phrenic nerves, they came to the division, and passed the ligature with a curved needle, about half an inch higher. The parts were then brought together by suture, and the wound bandaged. There were only three arteries divided—a branch of the internal mammary, and two branches severally from the inferior and superior thyroid. He lost only about three ounces of blood. The whole operation was about an hour.

"The patient immediately after felt quite well—pulse 60—temperature of the arm nearly the same as the other—respiration unchanged. From this period to the twenty-second day after the operation, he continued to improve, the suppuration went on well, the ligatures came away without accident, and the pulse, which had at one time risen to 120, was reduced by venesection to its natural standard, the cough was disappearing, cicatrization was going on properly, and the swelling becoming gradually less. He was in high spirits, and was so far recovered that he walked daily in the

garden of the hospital. All on a sudden, however, on the twenty-fourth day, a hemorrhage from the wound took place, and though it was soon got under, and there was little loss of blood, it recurred twice in the next two days, respiration became painful, and the patient died on the twenty-sixth day.

"Eighteen hours after death, the wound was black and foetid. There was no trace of inflammation in the arch of the aorta, the origin of the arteria innominata, or in the lungs. The internal membrane of the innominata was smooth and soft, and its parietes were so thick that there was only room for a crow-quill to pass. The subclavian artery opened into the tumour; the carotid was filled with coagulated blood. The arteries of the arm were healthy. The clavicle was carious, and almost separated in the middle. The death was evidently caused by extensive suppuration."*

The same operation was performed by Professor GRAEFE, of Berlin, on the 5th of March, 1822, in a sailor, about thirty years of age, for an aneurism in the right subclavian artery. The following account of the operation is given in a contemporary Journal:—† "During the operation, the patient was put upon his back on a table, in such a manner that his head was hanging down on one side of the table, and the arteria innominata drawn up a little above the manubrium of the sternum. The Professor then made a longitudinal incision, near the anterior edge of the sterno-mastoid muscle, down to the sternum, exposed the carotid artery, and followed its course till where it unites with the subclavian artery to form the trunk of the arteria innominata. This was effected with very little difficulty, and the arteria innominata became distinctly exposed to sight. By means of a needle, curved in a particular manner for that purpose, a ligature was then passed round the arteria innominata, and both ends of it tied together.

"No alarming symptom ensued, and the ligature, which was considerably broad, came away about a fortnight after the operation, carrying out just that portion of the artery where the innominata is divided into the carotid and subclavian artery. Some time afterwards, however, a hemorrhage suddenly arose, which, though considerable, was soon stopped by the application of cold water and pressure. The patient then complained of pains in the tumour formed by the aneurism, in which fluctuation was distinctly to be felt; and this determined Dr. Græfe to make an incision into the aneurismal sac. A considerable quantity of pus and grumous

* Langenbeck's Neue Bibliothek, and Journal of Foreign Medicine.

† Medical and Physical Journal for June, 1823.

blood was thus evacuated; and matter continued to be discharged daily from this opening, whilst the other was filled with granulations, and went on exceedingly well. The patient, however, got into a state of fever, began to spit blood, and to throw up matter; and so he died on the sixty-eighth day after the operation had been performed.

"On dissection, the lungs were found in a diseased state; and in the arteria innominata a clot had been formed, extending from its origin to where the ligature had been applied. By an injection made into the aorta, the arteries of the right arm and right side of the head were entirely filled; the circulation in these parts having been fully re-established by anastomosing branches."

Ligature of the subclavian artery has been twice performed in this country within the period embraced by this essay; but as the history of the cases, and the particulars connected with the operation, have not yet been published by the able Surgeons who performed it, we cannot at present take farther notice of the circumstance.

An interesting case of *fungus hamatodes* of the eyeball has been published by Mr. WISHART.* The disease originated from a blow received on the eye, and advanced steadily, during several months, notwithstanding the antiphlogistic and depletory treatment that was judiciously employed before it had arrived at that state, in which the operation of extirpation could not with propriety have been longer deferred. The general inflammatory symptoms having greatly subsided, from the evacuations that had been prescribed with that intention; "and the disease in the internal part of the eye being still on the increase, the iris being now in close contact with the cornea, and the pupil completely closed by the opaque matter, it was resolved to extirpate the eyeball; and the operation was performed in the following manner.

"The temporal angle of the eyelids was divided with a scalpel, which was then passed round, first at the frontal aspect of the eyeball, from the external to the internal angle, and the muscular and other attachments divided; the lower segment was divided in a similar manner; and the fore-finger of the left hand being passed from the nasal angle backwards, the optic nerve was found to form the only remaining connexion; it was readily divided with the same scalpel, and the whole removed from the orbit. The lacrymal gland was dissected out; the vessels were allowed to bleed for a few minutes. The divided eyelid was then brought together by a single small ligature; and the clotted blood being removed,

* Edinburgh Medical Journal for January, 1823: 1

two small strips of dry caddis were pushed gently into the orbit between the eyelids. Over this a pledget of simple ointment, secured by a compress of caddis, and a few turns of a double-handed roller, passed round the head. The little patient was put to bed. He bore the operation uncommonly well. It occupied only four minutes."

A twelvemonth after the extirpation the patient complained of no local uneasiness, nor of any affection of the head; and his general health was perfectly good.

Mr. Wishart has remarked respecting this case, that it is the only instance of fungus hæmatodes of the eyeball "that he has met with, in which the operation has been attended with success;" and as so long a period as eighteen months has elapsed since the operation was performed, he trusts that there is no probability of the return of the disease. "In all the cases," Mr. W. has gone on to observe, "detailed in Mr. Wardrop's work, the result of the operation was unfavourable, except in one doubtful case. But he records only one instance where the operation had been performed at a very early period of the disease, and none where the optic nerve was found in a healthy state. Although the operation, therefore, holds out little prospect of ultimate cure, if the disease is at all advanced, I was encouraged to try it in the present case, from being assured that the disease was in an early stage, being only of about four months standing when it was performed; and, though only a solitary instance of complete success, it ought to impress on the mind of every Surgeon the necessity of attending minutely to the symptoms of the disease, and the importance of operating at an early period. In this case, and in another of a child of two years old, I observed some puriform curdly matter floating at the lower part of the anterior chamber,—a circumstance that I am not aware has been noticed by any other writer on this subject."

Mr. Wishart found, on dividing the eyeball from the optic nerve to the apex of the cornea, "the appearances precisely the same as those so accurately delineated by Mr. Wardrop in the engraving of the drawing sent him by Sir Astley Cooper, and subsequently copied by Professor Scarpa into the last edition of his work on the Diseases of the Eye. The origin of the disease in the retina was finely and satisfactorily illustrated. The optic nerve was quite healthy. The sclerotic and choroid coats were of natural texture. The cornea was a little softer than natural, and not perfectly transparent. The lens was pushed into contact with it, and seemed smaller than natural, and flattened. The diseased mass, into which the retina had been converted, connected only to the optic

nerve, floated loosely in various folds, occupying both chambers of the eye. The eyeball did not appear to be at all enlarged."

Adverting next to *cancer*, a disease so nearly allied in its characters to the foregoing, the fact detailed in our Number for May * seems to point to an important circumstance in the etiology of this and of some other malignant disorders. The very interesting case, also, of cancer of the lip, † in which the operation lately recommended by RICHERAND was performed by Dr. C. A. BULL, of Cork, in so satisfactory a manner, cannot fail of attracting the serious attention of Surgeons, both on account of the very important practical principle which it conveys, and the pathological inferences which it supports.

An interesting case of amputation of the lower jaw has been detailed by Professor LALLEMAND, ‡ of Montpellier. The patient, a robust man, aged sixty-eight, was received into the hospital St. Eloy on the 23d of May, 1822. Nearly the whole of the inferior lip, from one commissure to the other, extending downwards to the lower margin of the chin, was in a state of cancerous ulceration, in which disease the periosteum and bone itself appeared to participate. M. Lallemand commenced the operation, to which the patient had consented, with two semi-elliptical incisions, commencing in the superior lip, about five or six lines from the commissure, and terminating towards the middle of the thyroid cartilage: the incisions were very convex above, and nearly straight below the chin. Having found the periosteum and bone affected, the former being engorged, thickened, and lardaceous, M. L. abandoned the idea of attempting to preserve the lower jaw. He dissected the cheek on each side to the anterior margin of the masseters. In this situation the periosteum seemed perfectly sound; and here he sawed through the jaw, commencing with the left side, a little obliquely from without to within, and from behind forwards; he then detached the muscles and soft parts on the internal aspect of the jaw, and sawed through the right side in the same direction. The labial, sub-maxillary, and ranine arteries were successively tied, and some other branches that occasioned slight hæmorrhage. He afterwards brought together the inferior angle of the wound by means of three pins and the twisted suture, and approximated the branches of the jaw, with the soft parts covering them, by adhesive straps, after having placed charpie in the interval which separated them.

* P. 436. † Published in the REPOSITORY for June, 1823.

‡ Journ. Univers. Décembre, 1822.

The whole was secured by compresses and a few turns of a bandage. After several untoward circumstances, * and fifty days after the operation, the whole of the wound was perfectly cicatrized. At that time an interval of nearly two inches existed between both ends of the jaw, allowing the passage of the tongue, and causing a dribbling of the saliva; for this latter evil M. Lallemand contrived a silver clin, holding a sponge on its concave surface, which could be readily secured by straps passing back over the neck. By aid of this sponge the saliva was absorbed and afterwards pressed out by the tongue or by any other means, and articulation, which was before indistinct, was rendered more complete by this contrivance.

The case of *united fracture* of the lower jaw, which was treated successfully by passing a seton through it, by Dr. PHYSICK, † comes before us a requisite proof of the propriety of this method, after the numerous instances of its failure in this country.

The case wherein *bronchotomy* was successfully performed by Dr. JAMESON, ‡ of Baltimore, for the purpose of extracting a water-melon seed that had lodged in the trachea, is important, inasmuch as, with those few instances wherein a similar operation has been undertaken on account of a like occurrence, it proves not only the propriety, but also the

* Hæmorrhage from the surface of the wound occurred a short time after the patient was put to bed, which occasioned pressure upon the larynx and base of the tongue, owing to the sutures and charpie having prevented its discharge. The patient had removed the bandages, and when M. Lallemand arrived, he found the hæmorrhage very considerable: it proceeded from no single vessel, but was discharged from the whole divided surface. M. L. considered pressure impossible, owing to the pain and difficulty of respiration which it occasioned; he therefore determined on the actual cautery, which he applied freely both to the soft parts and to the divided extremities of the bones, the spongy texture of which discharged a large quantity of blood. M. L. noticed during this process a pathological fact which he had uniformly observed under similar circumstances. On each application of the cautery, the heat produced a species of erection of the vessels, and the blood was thrown out with greater impetuosity, as if the arterial extremities were all at once straightened and augmented in diameter.

In the progress of the treatment, the cauterized extremities of the bone exfoliated, and farther delayed the recovery of the patient.

† Chapman's Philadelphia Journal, No. 9.

‡ Published in the *REPOSITORY* for April, 1823, and in the *American Medical Recorder*, No. 20.

necessity of resorting to this means of remedying what cannot be otherwise even alleviated, far less removed.

The operation for *empyema* has been successfully performed by Mr. BETTY,* in the very important case already alluded to under the head of pathology, and by M. ANGUET.† The latter instance occurred in a female, aged thirty, and supervened in consequence of inflammation of the pleura on the left side. M. Anguet, in consultation with Dr. MERLY, made an opening between the third and fourth true ribs, towards their anterior extremities, where the signs of collected pus were most evident. A branch of the anterior mammary artery was divided, but the consequent hæmorrhage was readily suppressed by means of agaric. Five pounds of purulent matter were discharged, and the patient experienced immediate relief, which continued for several days. However, as purulent matter continued to be evacuated through the opening, upon coughing and inclining forwards at the same time, M. Anguet therefore supposed that a considerable quantity of matter would continue to lodge in the lower part of the thoracic cavity, which could not be discharged by this aperture. On this account he determined on making a second opening into the anterior part of the same side of the thorax, between the last true rib and the last but one. This operation gave issue to more than a pound of a similar secretion to that formerly evacuated. The two apertures continued to discharge some pus for a month, during which time the health of the patient continued to improve. Diet and regimen suitable to the disease and the state of the patient's constitution were administered, under which the openings cicatrized and her health was perfectly restored.

Connected with the surgery of the *urinary organs*, the works of Mr. BINGHAM and Mr. HOWSHIP may be alluded to at this place, although it is unnecessary to add more respecting them than we have already done when they were the subjects of review, and when they were noticed under the head pathology. We shall, however, repeat the observations which we made on a former occasion respecting the influence of *injuries of the spine* on the bladder, in order that their validity may be subjected to examination, and the matters to which they relate may be scrutinized more closely than our opportunities in this department of medical inquiry allow us to do. "There are two topics," we remarked, "connected with retention of urine from injury to the spine, which hitherto

* Published in the REPOSITORY for March, 1823.

† Journ. Gén. Décembre, 1822.

have not been satisfactorily accounted for; namely, the ammoniacal state of the urine in those cases, and the proneness of the bladder to an inflammation, which speedily terminates in gangrene, when the urine has been retained from this cause.

“ In developing the pathology of the bladder and its connexions, it has been generally overlooked that this viscus is supplied with two sets of nerves, whose functions are distinct, namely, the voluntary and involuntary: that the former runs chiefly, but not entirely, to its neck and parts adjoining; that, in injury of the spine, the former only suffers, while the functions of the latter are but little impaired. Consequently, as all the sensations which depend upon the voluntary set of nerves are lost, in proportion to the extent of compression at their origins, the bladder becomes over-distended without the sensations accompanying such a state being conveyed to the brain. But, not only is sensation not transmitted; volition also cannot be conveyed by the medium of the voluntary nerves of this viscus; and hence the distention destroys the tone of its coats, which has been already impaired by the loss of one-half of its nervous energy, without any effort at evacuation being made by the patient. To remove this distention, the catheter is the only means; but it cannot draw off the whole of the urine while the bladder is entirely deficient in contractile energy; and even under the most favourable circumstances, it seldom can remove completely the contents of this viscus; consequently, the portion left undergoes the change natural to it when out of the body, which is heightened by the high temperature to which it is subjected while it remains within. The irritating qualities that are thus generated excite the vessels on the villous surface to throw out an additional quantity of mucus: this, in a great measure, remains as a sediment in the urine which the catheter does not remove, and undergoes putridity, which, with the ammoniacal properties thus evolved, farther irritates the bladder, which irritation, although not felt for the reasons just stated, runs on to inflammation, because inflammation and the other phenomena of the vascular system depend upon the involuntary nerves which are unimpaired, and are entirely independent of the voluntary, which are the seat of injury. Inflammation supervening under such circumstances soon terminates in a dissolution of the textures, owing, in some measure, to that loss of energy arising from over-distention, and to the defect of a portion of the wonted nervous influence, as before stated. It may be objected to this explanation that no urine is left by the catheter. How can it be otherwise, when the catheter lies in a loose and uncollapsing sac, as the bladder is in injuries

of the spine, and in the usual position of withdrawing the urine on such occasions?"

A formidable operation, the *extirpation of the womb* from its natural situation, has been lately attempted by Dr. SAUTER,* at the urgent desire of the patient, while suffering under a cancerous affection of this organ. The patient was fifty years of age; she had borne six children, and had ceased to menstruate about four years. "Having tried in vain to bring down the uterus with the index-finger of the left hand, M. Sauter introduced that and the middle-finger to the extremity of the vagina, and, with a straight knife, he separated it from the uterus, cutting the termination of the vagina little by little between his two fingers. In operating in this way, his object was to draw the uterus downwards, to detach it afterwards from the cellular membrane surrounding it, either with the handle of the knife or with the fore-finger of the right hand. He found this could not be done in any way that he made the attempt; but having advanced so far, it was necessary, he thought, to proceed, believing that the cancerous ichor would infect the cut surfaces. Re-examining the parts, he found the bladder had been wounded in separating it from the uterus, and he therefore determined to extirpate this viscus. He accordingly introduced two fingers of his left hand into the wound, between the bladder and uterus, and, cutting little by little between the fingers, he divided all the adhesions, until, with the finger which followed the borders of the uterus, he could penetrate into the *cavity of the abdomen*; he then passed the fingers of his left hand as high as possible to the lateral ligaments, seized and divided them as near as he could to the womb; he then separated it from the ovaria, from the Fallopian tubes, and the other ligaments. He then laid hold of the fundus with four fingers, and tried to invert it, but in vain, as the action of the abdominal muscles *pushed down the intestines*. Having desired the patient to restrain this action, and the intestines being pressed upwards by an assistant, he inverted the womb, and drew it out between the labia; the excision was then easy. This horrible operation lasted three quarters of an hour: only one pound and a half of blood was lost; the woman, however, fainted towards the termination. The *intestines being put back into their place*, the vagina was filled with charpie. We need not be surprised that this poor woman was troubled for several days with vomiting, and that her belly was painful; but in a short time all these symptoms disappeared, and, excepting that

* Annali Univ. di Medic. 1823.

some urine escaped from the wound, her recovery went on regularly. Suffice it here to say that, after a period of about three months and a half, the patient quitted the hospital. She, however, only remained at home seven days, and expired about a fortnight after her re-admission. M. Sauter describes this operation as not being either very painful or accompanied by much hemorrhage; but is of opinion that wounding the bladder is inevitable.*

Professor PALETTA, of Milan, considered himself to be the first Surgeon who extirpated the uterus from its natural situation.† He performed the operation, on the 13th of April, 1812, with the assistance of MONTEGGIA, for ulcerated sarcoma of the neck of the uterus. But, although no untoward occurrence took place at the time, the woman died on the fourth day after its performance. Several cases have been published in modern times, both in this country and on the continent, wherein the uterus has been successfully extirpated under certain circumstances of prolapsus.

For an account of the plan which M. DUPUYTREN has adopted for curing *prolapsus ani*, we refer our readers to the Number of the REPOSITORY for January.

The very interesting case of an extensive wound of the genital organs, published in this Journal,‡ by Mr. CALLAWAY, although it terminated fatally, from circumstances connected with the moral and physical condition of the patient, yet it illustrates, in a very satisfactory manner, an important principle in surgical science, as well as the propriety of the means adopted by this able Surgeon.

Dr. MURPHY has published a case of *chronic traumatic tetanus*,|| which was cured by means of very large doses of laudanum and rum: six hundred drops of the former were given in nearly a quart of the latter in the course of the twenty-four hours; and afterwards fifty drops of laudanum were directed to be taken in a glassful of rum, as often as the patient could swallow the dose. This latter *prescription* relaxed the spasms, and the patient experienced a protracted recovery.

However much we may value the fact which Dr. Murphy has recorded, we cannot sufficiently blame the style in which it is written. He appears to be a pupil of the school of composition, of which his countryman Dr. CALDWELL is the master, if, indeed, the term master ought to be so applied;—and which is characterized by want of precision and pro-

* Medical and Physical Journal, No. 293.

† Rev. Méd. Janvier, 1823. ‡ REPOSITORY for March, 1823.

|| Philadelphia Journal, No. 9.

prity of language, and by an inflated and gasconading style.*

The late Numbers of the Philadelphia Journal have contained some communications on the treatment of *fractures of the thigh*, by Professor GIBSON, of Baltimore; but as the plan which he recommends is the same with that long since

* We would recommend our American brethren to look to their literary reputation, and not to compromise their medical character in this particular. All men are more or less apt to judge of others from appearances; and although those of the same profession may be the least apt so to do, yet even with them appearances have due influence, for the traits of character cannot be otherwise seen, however intuitive the perception may be; and notwithstanding that the difference in the opinions which are formed of individuals arises more from the extent in which the observer is qualified to construe appearances than from the appearances themselves, still they are the requisite bases of judgment, for even the imputed intuition into character is nothing more than the result of the celerity and the correctness with which appearances are interpreted. Upon these grounds, therefore, we would recommend our American brethren to attend to their literary appearance, as it is one of the few tests by which the public are enabled to judge of professional character, and one too which has most essentially tended to advance the reputation of European Physicians, especially the Physicians of this country, in the judgment of the well-informed part of the community. The journalist himself, from the nature and multiplicity of his engagements, as well as from the stated periods at which he is obliged to come before the public, has it not always in his power to exemplify the precept which he inculcates, but surely those who are able to choose their own time of appearance should at least endeavour to render it tolerably respectable.

Dr. Chapman has the following motto for his Journal (published quarterly, each Number containing upwards of 220 pages), taken from the Edinburgh Review: — “In the four quarters of the globe, who reads an American book? or goes to an American play? or looks at an American picture or statue? *What does the world yet owe to American Physicians and Surgeons?*” If Dr. Chapman wishes to demonstrate the injustice of the last clause of the above quotation, by the character of his work, we think that he has failed in the eyes of his European readers; that he has succeeded in his aim on the other side of the Atlantic we as firmly believe. Our readers may judge, in some measure, of Dr. C.’s success in repelling the charge, as we have presented them with every thing of interest in medicine and surgery that has been published in this quarter during the two bygone years. In a literary point of view, the “American Medical Recorder” deserves still greater censure than the work which is edited by Dr. Chapman. We, however, express our acknowledgments to our American brethren for their valuable researches on absorption, an abstract of which was published in the Number of the *Repository* for June, 1823.

employed by a French Surgeon, we will not occupy our limits by taking farther notice of it.

The subject of *syphilis* has been brought fully before our readers in the Number of this Journal for April. Mr. CÆSAR HAWKINS has also furnished some interesting observations, in a contemporary work, * on syphilitic ulcers in the larynx.

The case of *scrofula* published by Mr. L. EDMONDSTON † demonstrates the efficacy of local depletion under certain circumstances of this obstinate disease.

The extending experience of the operation of *acupuncture* seems to lead to its more frequent adoption. The cases lately published by Mr. CHURCHILL, ‡ in addition to those recorded on the occasion of his introducing the operation to the notice of Surgeons in this country, fully evince its efficacy in painful disorders, especially in rheumatism : and the experience of Dr. SURTON and Mr. FINCH, as to its effects in removing anasarcous swellings, shows that it ought to supersede the use of scarification in these diseases.

The first volume of DELPECH's *Clinical Surgery* is the most important work in this branch of knowledge which has lately come before us. || From amongst the various important dissertations which it contains, we shall only direct the attention of our readers to one particular point connected with this Surgeon's observations on the treatment of club-feet. Without attempting to describe the various and well-contrived apparatuses which he recommends for remedying this description of congenital deformity, we may briefly notice the operation which he has adopted when the distortion arises from a shortened conformation, or permanent contraction of particular muscles or tendons. In these cases M. Delpech has endeavoured to apply to practice the process which takes place when tendinous structures are divided, and the divided extremities kept in a state of juxta-position. Taking advantage of the circumstance of an intermediate gelatinous substance being produced from the divided ends of a tendon, which, while it forms the means of reunion, tends to fill up the interval between both the extremities when this is not considerable ; and believing that this intermediate substance, at an advanced stage of reunion, possesses a considerable degree of tenacity and ductility, M. Delpech has proposed to divide the tendon of a contracted muscle, when the deformity can be assigned to that cause, or when the tendon itself is shortened. Having proposed the division of the tendon, he has next advised the divided ends to be kept in a state of

* Medical and Physical Journal for April, 1823.

† MEDICAL REPOSITORY for May, 1823. ‡ Ibid.

|| See Bibliography, in the REPOSITORY for May, 1823.

approximation until the connecting medium, which thus forms, has obtained a considerable degree of solidity, when it will bear a gentle degree of extension. For this purpose he employs an apparatus so contrived that the extension may be permanent, and may be increased according to the judgment of the Practitioner, until it has reached the full extent to which it may be proper to carry it, without risk of rupturing the medium of union. M. Delpech has recorded a very interesting case illustrating this particular treatment. A boy, aged nine years, had a congenital deformity of his right foot, arising from a permanent contraction or shortening of the gastrocnemii muscles and tendon Achilles. The ankle-joint was perfect, but the foot was so firmly extended and so completely on the same axis with the leg, in consequence of the congenital contraction, that motion at the ankle-joint was impossible in this state. The points of the toes only could touch the ground. Having ascertained the state of the parts, and having adapted an apparatus to the foot and front of the leg and knee, which was well calculated to keep the divided ends of the tendon Achilles in a state of approximation, and also to make extension, as soon as the connecting medium could bear it, by means of bringing and fixing the foot in the direction of a right angle with the leg, M. Delpech divided the tendon Achilles, and made the extremities approximate until the medium of union was fully developed. On the twenty-eighth day after the section of the tendon, M. D. commenced to make a gentle extension of the connecting substance by bringing the foot towards a right angle with the leg. Before entering on this process, he had ascertained that the intermediate substance had attained a degree of solidity which could warrant extension; that the wound of the integuments, through which the division of the tendon was made, had nearly cicatrized; and that the tendon had acquired a very few lines in length, owing to the formation of the substance connecting its divided extremities. From this period M. D. continued to increase daily the extension of the tendon, or rather the flexion of the foot, by the progressive turn of a few teeth of the wheel of his apparatus. At each time of making extension, which was generally in the morning, the patient felt considerable pain in the tendon, which always subsided in the course of two or three hours.

A month after this process had been commenced, the substance of reunion appeared to have reached the greatest length of which it appeared susceptible: it was then two inches in length, and much less in diameter than the rest of the tendon. The foot had reached a right angle with the leg,

and the patient could walk or run with but little lameness some months after the operation, which was performed in May, 1816.

The description of the principal operations in surgery, as they are practised in England and France, contained in the small work of Mr. AVERIL, deserve to be noticed at this place, especially as they embrace the methods of operating recommended by LISFRANC (an eminent authority on these subjects), which are not generally known amongst us. The very excellent papers of M. Lisfranc, connected with operative surgery, which have been published in the late Numbers of the *Archives Générales de Médecine*, deserve the perusal of Surgeons, not only on account of this Surgeon's observations on the methods of operating which he has introduced, but also for his comments on those which are practised by other Surgeons of celebrity.

MIDWIFERY. — Commencing this department of our historical sketch with an account of the more rare deviations from the regular and usual process consequent on impregnation, the first important occurrence which we have to record, according to the natural arrangement of this subject as it is pointed out by the generative process itself, is a case of *superfoetation* which has been lately published by Baron PERCY.* A woman, residing in the vicinity of Lagny, became pregnant in July, 1820, for the third time. She felt distinctly the movements of the child about the fourth month, which gradually became more feeble, and at last entirely ceased. In the course of seven weeks from this period, she experienced all the symptoms of a fresh pregnancy, and the nine months of this gestation passed on without any remarkable occurrence. She was attended by Dr. Cochard, of Lagny, and Dame Robert. She had an easy and rapid labour, and was delivered of a small but lively male child. Soon afterwards, when the midwife was about to leave her, fresh pains came on, during which a number of black unorganized coagula escaped from the uterus, and were succeeded by a black, flocculent, spongy mass, in the middle of which was a female foetus, seemingly of the fourth month, and well preserved. The boy was nursed by his mother, and throve well.

The history of this interesting case would lead us to suppose that the first foetus—that which was discharged last, with the black-coloured coagula, died in utero at the time when its movements were felt gradually to cease by the mother, and that foetation again took place, soon after its death, and while it was still retained in the womb.

* Journ. Univers. Mars, 1823.

The very important case of *ovarian fatation*, recorded in the June Number of this Journal, by Mr. W. B. PAINTER, and already referred to under the head pathology, is an interesting addition to the history of extraordinary occurrences connected with this branch of medicine. The value, however, of this and similar cases does not consist in their novelty, but in the light they throw on some of the most obscure, but most important operations of the animal economy.

A case of *Fallopian conception*, which came under the observation of Dr. ROAGNA,* furnishes an interesting instance of the operations of nature in remedying such an occurrence. A healthy Spanish female became pregnant for the third time. This state was evinced by the usual symptoms. The abdominal tumour was directed towards the left iliac region; and the motions of the child were distinctly felt at that situation, about the period of quickening. Soon after this epoch she was seized with pains similar to those of labour, which terminated in an evacuation from the uterus of a fluid tinged with blood. Milk-fever supervened to this discharge, and the breasts became filled with milk. She menstruated regularly from the month of December to August of the following year, when the catamenia ceased, and were succeeded by a continual discharge of a yellowish white matter, and by pain and various anomalous symptoms referrible to the uterine tumour and pelvic region: she had also a continual diarrhoea, accompanied with tenesmus. About the commencement of the second year of her ailments, her sufferings increased, continued fever, with intervals of cold and of burning heat, supervened, and the sense of heat and the pains which were referred to the sacrum became more severe. Soon after this period she evacuated by the rectum several bones, without cartilage or covering. The excretion of the bones was accompanied with a discharge of purulent and sanguineous matter. On carefully examining the parts, M. Roagna discovered that these bones had passed from the left Fallopian tube through an opening of about six lines in extent that existed in the intestinum rectum, twenty-one lines from the anus. This evacuation continued at intervals up to the third year after the conception. Since that time she has menstruated regularly, and enjoyed a return of her usual good health.

Adverting next to those occurrences which have been lately recorded, illustrating the nature and management of the parturient process, and of the derangements which frequently

* Revue Médicale, Janvier, 1823.

complicate and render difficult or dangerous this important operation, the facts connected with *puerperal convulsions* deserve, from the importance of the subject, an attentive consideration. An interesting case of this description has been placed before our readers by Dr. HENRY DAVIES,* wherein depletion, carried to a very great extent, proved eminently successful. In this instance the placenta was allowed to remain for a few hours, owing to particular circumstances connected with the case. The total blindness which characterized it, and, indeed, its subsequent history, render this instance of the disease important in a pathological point of view.

The employment of the *ergot of rye* in puerperal convulsions has been successfully adopted by American Practitioners.† Dr. WATERHOUSE has detailed the case of a female of a nervous temperament and delicate habit, who was seized with this disorder at the commencement of labour, and while the os uteri was in a very small degree dilated. Every method had been adopted, which he considered advisable, without advantage, when the ergot presented itself to his mind as the only remaining means which he could employ with the hope of saving his patient. He mixed thirty grains of this substance in a small quantity of warm water, and with difficulty procured its deglutition. "The effects," he has informed us, "were almost instantaneous. Her spasms gave way, and she awoke, as she supposed, from a disturbed and painful sleep."‡

For a full detail of the experience of Dr. STEARNS, of New York, respecting the exhibition of the *ergot* in parturition, and for copious directions for its use, we must refer our readers to a former Number.||

Rupture of the uterus, one of the most dangerous accidents that can attend on the process of parturition, has come before us on two occasions within the period embraced by this essay. Both these cases were most remarkable, and even singular in their complication; especially the one which is recorded by Mr. GAITSKELL.§ It is unnecessary to make farther reference to that interesting occurrence, as it is already placed fully before our readers: we will, however, notice some particulars connected with the other, which is published

* REPOSITORY for June, 1823.

† See a case of its beneficial effects in another part of this Number.

‡ American Medical Recorder, No. 20, and MEDICAL REPOSITORY for April, 1823.

|| MEDICAL REPOSITORY for April, 1823, p. 279.

§ Ibid. for March, 1823.

by Dr. CHURCH in an American work,* as it illustrates one of the consequences of injury done to the bladder during difficult cases of labour, in addition to the occurrence under consideration, the cause of which admits of various interpretations. Dr. C. was called to this patient, aged thirty-six years, while she was in labour with her fifth child, and attended by a midwife. On examination, he found that the head of the child had descended low, and was wedged in the pelvis. By passing his hand over the abdomen, he was surprised to find that it had, in a great measure, lost its globular form—and that just above the pubes, on the right side, he could distinctly feel through its parietes the child's elbow. He therefore apprehended a rupture of the cervix uteri, and inquired if she had experienced any feelings indicative of such an occurrence; but none of the symptoms, which usually evince its supervention, were remarked. The absence of the ordinary signs of rupture led him to hope "that the cervix uteri had spasmodically contracted around the child's elbow, and under this impression he took sixteen ounces of blood from the arm, on which her pulse became soft." He afterwards gave the powdered ergot, and repeated it without any effect on the uterine action. Her pulse becoming rather weak, several unsuccessful attempts were made with the *forceps, lever, and blunt hook*, to bring down the head, during which "the child, at once, receded with a hissing noise through the rent into the cavity of the abdomen." The symptoms usual to such a state then became manifest; and the woman died within a few hours undelivered. On dissection, which took place some hours afterwards, every part of the child was found to have escaped from the cavity of the uterus. The placenta was not adhering to the uterus, although remaining in its situation. "The uterus," Dr. Church has continued to inform us, "presented a general and extensive laceration from the *fundus* to its connexions with the bladder and rectum. Its parietes were reduced from the ordinary thickness to that of paper, and more particularly so at the insertion of the Fallopian tubes, where it was quite transparent, and of a frail cobweb-like texture. We then sponged up about a pint of blood from among the intestines and the cavity of the pelvis. The next organ examined was the bladder. This exhibited a truly singular appearance. Its size was preternaturally large—white and shining in its external coat—and of a texture as hard and firm as the most indurated mammary glands we ever recollected to have seen. An incision was made into the fundus, and extended

* Philadelphia Journal, No. 9.

to within an inch and a half of the urethra. At the fundus, its parietes were *two inches and three-eighths of an inch thick*; and at the lower extremity of the incision, *at least two inches*. To form a more accurate idea of this scirrhus mass, its circumference around the fundus was carefully measured, and found to be sixteen and a half inches—its length from the margin of the fundus to the insertion of the urethra, was eleven inches and an eighth. The walls of the bladder had a cartilaginous feel, and were of a whitish and striated colour. The cavity presented a very irregular surface, and appeared as if it had contained clots of grumous blood. Its dimensions were so much reduced, that we are confident it could not contain more than two ounces of fluid at any one time. No calculi were contained in it.

“The ureters were preternaturally large, and, like the bladder, had a white shining exterior, with a cartilaginous feel and firmness. The ovaria next came under our notice—and we discovered the right enlarged to the size of a walnut, and in a scirrhus state. The left was natural. The broad ligaments were covered with small tubercles, and were torn in several places. The round ligaments were perfectly natural. The rectum was free from disease. No laceration or rupture of the vagina had happened.”*

* That rupture of the uterus had not taken place, in this interesting case, when Dr. Church felt the prominence above the pubes, is evident from his own showing. The pulse before the bleeding “was full and tense, and the countenance perfectly natural,” &c. &c. It is much more probable that the attempts to bring down the child’s head, under the state of morbid structure observed in the uterus, actually lacerated this viscus. The attempts at introducing the forceps, or at bringing away the child by means of the lever, were sufficient to produce this effect under the singular circumstances of disease of the uterus, although such means were perfectly justified by the state of the patient. That this was actually the case, is shown by the symptoms of rupture which then became most evident, and not until then. The deception, on the examination of the abdomen, arose, perhaps, from the morbid condition of the bladder. Was Dr. C. sure of the previous death of the fœtus, that no attempt was made to bring it away alive, when it was evident that the mother could not be saved? It does not fully appear that he was by the manner in which the case is related.

Dr. C. has given the following history of this case previous to the occurrence already noticed, which appears to account, in part, for the disease of the bladder:—“In the month of February, 1816, Mrs. D. was, after a very difficult labour of five days and nights, delivered by the natural powers of her first child. It was very large, and to all appearance had been dead two or three days. A slight

Two cases of *Cæsarean operation* have been recorded by Mr. J. U. VAN BUREN, of Tortola,* one of which proved successful, notwithstanding the warmth of the climate in which it was performed. This case, which occurred in a slave, aged thirty-five, in her sixth pregnancy, took place in April, 1820. Dr. DOTY, who attended this female, had ascertained that labour was impeded by deformity of the pelvis, which had evidently advanced to the state in which he found it since her last delivery; considering the Cæsarian operation indispensably necessary, he sent for Mr. Van Buren. "After having attentively examined," this Surgeon has informed us, "the state of the pelvis, and found the malformation such as to render it impracticable to introduce any instrument for the removal of the child, I did not hesitate in coinciding with Dr. Doty in the necessity of the immediate performance of the Cæsarian section; being of opinion that, where the state of the pelvis is such as to prevent the possi-

attack of puerperal fever supervened, which in a few days yielded to the usual remedies. But she also complained of a violent pain in the region of the bladder, with inability to make water. Opium, anodyne glysters, warm fomentations, and demulcent drinks, were prescribed, which mitigated the pain, though the inability to make water still continued, and she had to be relieved every few hours by the catheter. Early in March following, enuresis came on, of which, by the aid of the usual remedies, she recovered in about three weeks. The use of the catheter had to be continued till about the middle of April, when, her health being *apparently* re-established, further medical attendance became unnecessary. From February, 1816, until June 23d, 1822, she had one miscarriage, and was at different times delivered of three children at the full period, one of whom was still-born. She always had severe and lingering labours.

"I think it more than probable that the bladder was injured during the first labour, owing to the child's head being wedged low down in the pelvis, upwards of twenty-four hours previous to delivery. This made it impracticable to introduce the catheter to evacuate its contents; consequently distention took place, occasioning inflammation and thickening of its muscular coat, and which eventuated (terminated) in scirrhus: and that it being so frequently exposed to injuries during laborious parturition, kept up and increased its diseased condition, which gradually extended to the uterus and the parts connected therewith: and further, that the constant pressure which the uterus sustained between the child and the firm and enlarged bladder, caused absorption of the parietes of that organ—hence, rupture of that viscus took place. I am, indeed, much astonished, considering its diseased state, that it did not rupture much sooner. The state of the bladder satisfactorily accounts for the unsuccessful attempts to deliver by the forceps and lever."

* Medical and Physical Journal for February, 1823.

bility of the child's passing, no time should be lost, from the firmest persuasion that lives would be saved by the early resort to the operation, instead of waiting (as is too frequently the case) until the patient becomes exhausted by useless efforts to expel the child. The patient, instruments, and dressings, being ready, I operated in the following manner:— Having placed the patient on her back on the table, with a common scalpel I made an incision through the integuments, from the umbilicus to the pubis, so as to expose the *linea alba*. An opening was then made at the superior part of the incision, through the aponeurosis of the *linea alba*, into the cavity of the abdomen. Introducing two fingers as a defence against wounding any of the viscera, with a curved bistoury the *linea alba* and peritoneum were divided, the full extent of the first incision. The uterus immediately presented itself; an inspection, to ascertain the situation of the placenta, being previously made with all possible despatch. An incision was made into the superior part of the fundus uteri, and extended about seven inches, when the foetus and placenta were extracted as speedily as possible. In the instant of removing the foetus, a prolapsus of the intestines took place, but they were immediately returned, and kept *in situ* by Dr. Doty. The lips of the external wound were brought in contact by sutures and adhesive plaster, care being taken not to include the peritoneum in the sutures. The eighteen-tail bandage was used, the patient put to bed, and an anodyne given.”

“ The patient did not lose more than eight ounces of blood during the operation, which she bore with astonishing firmness. Every precaution was taken to save the child, which lived for several hours.* The patient slept well during the greater part of the night. Not having passed urine for some time, she was relieved by the catheter. She was free from pain, and had every appearance of doing well, until the morning of the fourth day, when she complained of thirst, had slight fever, but felt no pain or soreness of the abdomen. At noon she complained of griping pain: an enema was ordered, which procured two evacuations, and afforded her relief. The rest of the day she continued free from pain. Her diet consisted of salup, panada, and flour-pap. She slept well this night, without an anodyne.

“ About two o'clock, P. M. of the following day (the fifth after the operation), she became restless, and complained of much pain in the lower part of the wound, attended with

* The patient had been upwards of sixty hours in labour before the operation.

nausea, inducing efforts to vomit. The pulse was contracted, hard, and upwards of 100; tongue dry. Thirty ounces of blood were taken from the arm, and the following anodyne administered:—

R Tinct. Opii, ℥xl.
Spt. Æth. Nit. 3ss.
Aq. Menth. Sat. 3x. M.

In about half an hour she found relief, and slept for several hours. Her bowels were kept open by the use of glysters, and the same diet was continued.

“On the sixth day, she had no return of pain or nausea, and her appetite was good, until a few hours after the first dressing (which took place on this day), when she was attacked with intense pain in the abdomen, attended with vomiting. Her bowels were now perfectly free; the pulse upwards of 100, and, as before, hard and contracted. Sixteen ounces of blood were taken from the arm, and flannels steeped in warm spirits applied to the abdomen. She had a severe rigor. The patient attributed this relapse to the circumstance of the door of her hut (which opened directly opposite her bed) being incautiously left open for several hours, during which time she was exposed to the draught of a northerly wind. The first bleeding afforded no relief; and no internal remedy could be resorted to, for the stomach rejected every thing. In about three quarters of an hour, twenty-four ounces of blood were taken from her. Shortly after this bleeding she found relief, and fell into a sleep of several hours' duration. The wound retracted at the inferior part of the incision, for about two inches: it, however, did not assume an unhealthy appearance.

“The following day she was much better, and continued doing well until the eighth day, when, unfortunately, the bedstead on which she lay fell down, and gave her a violent and sudden shock. She soon after complained of having received sensible injury from the fall. On the evening of the same day she complained of violent pain in the neck and back, in the course of the spine, with stiffness of the jaws, and difficulty of deglutition. I visited her about two hours after she was seized. The jaws were much locked, and the spasms increasing rapidly in violence. One dram of laudanum was administered in a gill of white wine. The neck, back, and throat, were rubbed with warm oil and laudanum. The spasms not abating in half an hour, two drams of laudanum were administered in burnt brandy. In about a quarter of an hour after the last dose was given, the symptoms abated; but at the expiration of the half-hour the dose was repeated, as before, in burnt brandy, as the patient did not appear to be

sufficiently under the influence of the medicine to produce a complete remission of symptoms. Shortly after this she fell into a profound sleep, and the tetanic symptoms did not return. Her diet was now ordered to consist of animal food, and Madeira wine, to the extent of three gills, per day. The wound retracted a little more, assumed an unhealthy appearance, and for several days the discharge was sanious and fetid. Stimulant applications were made use of, and in a few days healthy action was renewed. The wound was dressed daily, from the sixth day, until cured.

"From this time no material circumstance occurred. On the nineteenth day from the operation she was able to walk about the yard. An elastic roller was ordered to be applied over the abdomen, and worn for some time. The patient continues well to this day, and does field-work with the rest of the negroes on the estate."*

On the 20th of May, 1822, Mr. Van Buren was called to the second case, a negro woman, in labour with her first child. On examination, he found an extensive warty excrescence uniting firmly the labia nearly their whole extent. In consultation with Drs. PORTER and ROSS, it was decided that, considering the indurated nature and situation of the tumour connecting the labia, "excessive hæmorrhage would attend the excision, and, in all probability, endanger the life of the woman; and that, therefore, the Cæsarean section was the only alternative."† Accordingly the operation was per-

* The importance of this case, and the able manner in which it was treated, must be our apology for the particular account which we have given of it.

† Were the dangers to be apprehended from excision of this warty tumour, and from attempting to procure delivery afterwards, *viâ naturali*, as great as those which we might expect from a division of the abdominal and uterine parietes? We certainly would answer this question in the negative. It does not appear that the vagina was included in this state of disease, for we are informed that a passage still existed into it—"admitting the introduction of but one finger into the vagina." Those who had the opportunity of examining the patient were certainly the best judges of the means to be adopted for her relief; but we must be permitted to suggest, that the case may not go down to posterity without dissent from the principle which it appears to involve, and which it may become a precedent for under some circumstances, that the excision of the warty excrescences connecting the labia, and the acceleration of the labour, which was at the time in progress, would not, under proper management, have been attended with the excessive hæmorrhage which was dreaded. Indeed the passage of the child, and consequent pressure, would have arrested hæmorrhage for a time, and

formed in the manner described in the former case, and a living child removed, which has continued to thrive: The patient was put to bed, and an anodyne given. "She continued free from pain, was cheerful, and sanguine as to the event, for two days, when her bowels became obstinately costive, and the abdomen very tense. A saline cathartic was administered without effect. Injections were given every two or three hours, which opened her bowels on the third day. The fourth, she continued to do well. On the fifth, her stools became frequent and watery: port wine and Indian arrow-root, with anodyne injections, were ordered. The discharge from the bowels was arrested for a few hours; but, owing to the want of attention in the regular administration of wine and nourishment during the night, the discharge from the bowels returned with increased violence, under which she sunk, and died on the sixth day after the operation."

The concluding part of our historical report of the progress of the obstetric art would have related to those disorders which supervene soon after, and as a consequence of the parturient process, if any additions had been made to this branch of the subject within the period to which we are limited, or if any observations possessed of due interest had come before us. A very long treatise, however, on *uterine hæmorrhage*, by Dr. DEWEES,* has reached us in part only; but as we are yet strangers to the extent to which the Doctor intends to prolong his discourse, we cannot at present make farther reference to it.

The excellent articles connected with midwifery, contributed by Professor DESORMEAUX to the volumes of the *Dictionnaire de Médecine*, which have already appeared, will be read with advantage by those who devote their attention to this branch of medical practice.

BOTANY.—We regret that our limits oblige us to give rather the references to the observations connected with this branch of science that have lately come before us, than a detailed account of the observations themselves. The most important work, which it is our duty at present to notice, is the synoptical description, by Professor KUNTH, of the

after delivery means might have been devised which would have stopped it altogether, if it recurred. The only risk from this procedure was the hæmorrhage: the risk in the Cæsarean section was double—the risk from hæmorrhage was great, and that from peritoneal inflammation was still greater, which latter was not to be dreaded from the excision in question.

* Philadelphia Journal, Nos. 6, 7, 8, 9, 10.

plants collected by HUMBOLDT and BONPLAND during their researches in South America,* the greater part of which synopsis has just appeared. Of four thousand five hundred plants brought by these travellers from equinoctial America, about four thousand have been shown to be new species. The splendid work which M. Kunth published, in six folio volumes, under the title of "*Nova Genera et Species Plantarum*," contained an admirable account of these extensive discoveries. It may be proper to mention that, during the publication of this work, M. Kunth availed himself of the assistance of two distinguished individuals: M. AGARDH, Professor at Lund, described the Algæ; and our eminent countryman, Dr. HOOKER, Professor of Botany at Glasgow, arranged the orders, Musci, Jougermania, Lichenes, and Fungi. The number and beauty of the plates, which accompanied the descriptions in that splendid work, rendered it too expensive for general circulation amongst botanists: M. Kunth and his distinguished associates have, therefore, considered it proper to publish a synopsis of their labours in this department of knowledge, which may be accessible to the learned and scientific of every country. M. Kunth has followed a natural arrangement in both the former and present works. He has commenced with the order *algæ*, and has given not only the generic and specific characters of each plant as he has proceeded, but he has also noticed the various synonyms, the precise place where each vegetates, the time at which it flowers, the colour and appearance of the flowers, its use in medicine and in domestic economy, and various other particulars possessed of interest to the scientific or practical botanist.

Professor BERTOLINI, of Bologna, has published† an account of some plants but little known to botanists. Of these two are indigenous, the *polygonum flagellare*, Bertol.; and the *arnica floccosa*, a new species: the others have been brought from intertropical America, and are too numerous to be particularized within our limits.

An interesting enumeration of plants collected on the banks of the Black Sea and in the islands of the Grecian Archipelago, has been lately published by M. DUMONT

* Voyage de Humboldt and Bonpland, 6e. partie. Botanique. — Synopsis Plantarum, quas, in Itinere ad Plagam Æquinoctialem Orbis Novi, collegerunt Al. de Humboldt et Am. Bonpland. Auctore Carolo Sig. Kunth, Prof. Reg. Acad. Berol., Institut. Gal. &c. &c. Paris, 1823.

† Antonii Bertolinii, Med. Doct. &c. Lucubrationes de Re Herbariâ, &c. Bononiæ, 1823.

D'URVILLE.* This addition to botanical science is important under two points of view, 1st, as a geographical catalogue of plants from places but imperfectly known to botanists. M. D'Urville has given an enumeration of 950 species, of which the majority is either new or never before assigned to the countries where he found them; or then known only by means of the collections and manuscripts of TOURNEFORT. This catalogue, however, is not arranged into natural families; and the circumstance is the more to be regretted, as the natural classification is the only one that can give an exact idea of the kind of vegetation of a district or country. 2d, The botanical descriptions of the plants discovered by M. D'Urville are given with much care. They amount to about 60 species, chiefly belonging to the families of the *Gramineæ*, *Rubiaceæ*, *Caryophylleæ*, *Umbelliferae*, *Labiatae*, *Leguminosæ*, *Orchideæ*, and *Algæ*. The last named order has received, by the researches of this botanist, six additional species and several varieties, which have been determined and described by M. LAMOUROUX.

Two new families of plants, the *Balanophoræ* and the *Cyclantheæ*, have been lately established in France. The former, which has been described by M. L. C. RICHARD,† embraces four genera, of which two only have been known to former botanists, the *Cynomorium*, and the *Balanophora*. M. Richard has added the other two genera; one of which, the *Langsdorffia*, was discovered by MARTIUS in the Brazil; and the other, the *Helosis*, is entirely new.

The latter natural family, the *Cyclantheæ*, which M. A. POITEAU has proposed to establish,‡ contains only one genus, *Cyclanthus*, a new and singularly organized genus. This family is nearly allied to the *Aroideæ*, and especially to the genus *Carludovica*, the characters of which genus this botanist has endeavoured to describe more accurately than they have been heretofore.¶

A very interesting and classical production, entitled the *Flora of Virgil*,§ has been published by M. FÉE, of Paris. The importance of such a work to the cultivators of classical

* Enumeratio Plantarum, quas in insulis Archipelagi aut Littoribus Ponti-Euxini, annis 1819 et 1820, collegit, atque detexit J. Dumont D'Urville, Mem. de la Soc. Linn. de Paris, T. I. 1822.

† Mémoires du Mus. d'Hist. Naturelle, Vol. VIII. p. 404.

‡ Mém. du Mus. d'Hist. Nat., Tom. IX. p. 34.

¶ Oper. cit. p. 25.

§ This work, which was lately published along with an edition of the Latin classics, has appeared separately within the by-gone month.

literature, as well as to botanists, will be most evident. The learned papers also of the same author, in the late Number of the *Journal de Pharmacie*, especially those on the *Lotos* of the ancients, will be perused with much interest.

The first volume of the work of M. A. RICHARD,* on *Medical Botany*, has appeared within the period to which we limit this sketch. The author has given a full account of the natural history of the medicines, poisons, and aliments which are derived from the vegetable kingdom. This work possesses the advantage of having the plants, which are described in it, distributed according to the natural method of JUSSIEU. This is a great recommendation to those who study botany with a regard to the practice of medicine, because the properties of plants of the same family are generally analogous, and hence the Physician may generalize his views respecting the properties of medicines contained under the same family, and may have a more extended field before him whence he may choose, or may vary, his remedies according to circumstances.

M. Richard has described the families, genera, and species with great accuracy and precision, and has added interesting observations on the use, properties, and chemical composition of the particular species. He has, at the conclusion of each family, recapitulated the general qualities and modes of action on the animal economy of the plants which it embraces. The natural history of the different species of cinchona, which concludes this volume, is particularly interesting.

A very valuable exposition of a new method of classification, which has been adopted in arranging the plants at the School of Pharmacy in Paris, has been published by M. GUIART.† This plan appears more nearly allied to that of TOURNEFORT than to any other.

We regret that our limits prevent us from giving this very able, although in some respects objectionable, arrangement in the present sketch; as, however, it has only recently come before us, we will defer it until our next historical essay. Another methodical exposition of the vegetable kingdom has lately claimed our attention. The author of this ingenious production, M. CAFFIN,‡ has supported his views with great

* *Botanique Médicale, &c.* Par A. Richard, M. D. Première partie, 1 vol. in 8vo. Paris, 1823.

† *Journal de Pharmacie*, Mars 1823.

‡ *Exposition Méthodique de Règne Végétal, dans laquelle les Plantes sont classées d'après les Différences qu'elles présentent dans leur Organisation et leurs Fonctions, &c. &c.* Par F. I. Caffin,

ability, and with a perfect knowledge of his subject. His observations respecting the organization of fruits are particularly interesting. With respect to his classification, many objections may be urged against it. Indeed, it furnishes an additional proof how very difficult, and even impossible, it is to assign and to establish the natural relations of vegetables by means of a single organ or part; and it clearly points to the propriety of consulting the general characters and conditions of all the organs, or the greatest number of general similitudes, in order to bring together organized beings into strictly natural families.

The most interesting works which we may notice, as being in progress of publication in this country, are, the *Anatomy and Physiology of Plants*, by Mr. A. T. THOMSON; the *Flora Exotica*, by Dr. HOOKER; and the *Scottish Cryptogamic Flora*, by Mr. GREVILLE. These works are becoming well known to the cultivators of botanical science; and we expect that they will contribute materially to excite a desire after this branch of knowledge, especially in the medical profession, amongst all ranks of which it is very improperly neglected.

No additional facts have come to our knowledge within the last six months respecting the *anatomy* of plants. M. T. DE SAUSSURE has, however, been engaged in some interesting observations which elucidate their *physiology*. This philosopher has ascertained, as the results of his experiments, that the flowers, even of aquatic plants, do not develop themselves in *media* deprived of oxygen gas; and that they require, for the support of their vegetation, a greater proportion of this gas than the rest of the plant. When a flower is placed under a receiver full of air, and shut by mercury, it changes little or nothing the volume of the air, while oxygen is present. It absorbs this gas, replacing it by nearly an equal volume of carbonic acid. M. de Saussure has not found any trace of hydrogen nor of azote in the air in which flowers have vegetated. He found the quantity of oxygen destroyed by the flowers to be greater in the sun than in the shade: he observed also that a rise of temperature also augmented this destruction. While the flowers thus consume a much greater quantity of oxygen than the rest of the plant, and soon perish when deprived of it; the leaves contain so much oxygen in their green parts that, when deprived of it for a while, they form a proper atmosphere by means of the quantity which they give off.

Médecin. 8vo. Paris, 1823. — See Bibliography in REPOSITORY for April, 1823.

M. de Saussure also observed in his experiments that simple flowers destroy more oxygen than double flowers of the same volume and kind; that the greatest quantity of oxygen was consumed at the moment of fœcundation; and that the stamina adhering at their base, and to the receptacle, caused the disappearance of more of this gas than the other parts of the flower.

LAMARCK had discovered that the spathæ of the genus *arum* evolved heat, and LENNEBIER and HUBERT confirmed the observation. Saussure has observed this property in some other plants, although it is most remarkable in the species belonging to this genus, and he is inclined, partly, to account for it by the rapid destruction of oxygen, or its combination with the vegetable carbon, especially during the time of fœcundation. He found the heat of many flowers to be in proportion to the quantity of gas destroyed. He, however, considers the absorption of oxygen not to be the only cause of heat; for the *bignonia radicans*, which is a warm flower, consumes less oxygen than the *passiflora serratifolia*, which is a cold flower. A fallacy is apt to arise in estimating the heat of plants, owing to their evaporation, and to the moisture adhering to the bulb of the thermoscope, and thence evaporating.*

CHEMISTRY.—Our limits prevent us from noticing the greater part of the numerous researches into the constitution of particular substances which have lately come before us, and oblige us to confine our sketch to a few investigations which have tended to render the present an important epoch in the history of chemical science. The researches of Mr. FARADAY respecting the constitution of the gases appear to us the most important amongst the latter number, and indeed the greatest discovery which has been made for several years in this department of science.† This enterprising Chemist has ascertained that many of the gases may be condensed into liquids, and that the liquids thus produced are colourless, with the exception of euchlorine; and all are perfectly fluid, and highly volatile. As the communications, which have been read before the Royal Society, describing the means of obtaining these very important results; and the papers of Sir Humphry Davy on the application of the liquids thus produced, as mechanical agents, have not yet been published, we cannot at present make farther reference to the subject.

* Mem. Soc. Phys. et Hist. Nat. Geneva.

† REPOSITORY for May, 1823.

The researches of Dr. URE into the composition of vegetable and animal substances* form the greatest acquisition to analytical chemistry which has come before us for some time. The importance of the subject, when viewed in relation to the materia medica and pharmacy, and, consequently, to the practice of medicine, is most apparent. We consider, therefore, that no apology can be required from us, for giving the results of the investigations of this very able and industrious Chemist into this interesting subject — a subject which, we are happy to perceive, has obtained that degree of attention from Dr. Ure which its importance (to medical science especially) demands. After describing the apparatus and process which he employed in his extensive analyses, Dr. Ure has given the results in the following table, after which he has applied these results to the atomic theory, and accompanied them with interesting remarks:—

TABLE OF ORGANIC ANALYSES.

Substance.	Carbon.	Hydrog.	Oxygen.	Azote.	Water.	Excess.
1 Sugar	45.38	6.29	50.33		56.62	Oxyg.
2 Sugar of diabetes	39.52	5.57	54.91		51.13	10.35
3 Starch	38.55	6.13	55.32		55.16	6.03
4 Gum arabic	35.13	6.08	55.79	3?	54.72	7.15
5 Resin	73.60	12.90	13.50		15.20	Hydro.
6 Copal	79.87	9.00	11.10		12.05	7.06
7 Shell lac	64.67	8.22	27.11		30.51	4.82
8 Resin of guaiac	67.88	7.05	25.07		28.00	3.93
9 Amber	70.68	11.62	17.77		20.00	9.40
10 Yellow wax	80.69	11.37	7.94		8.93	10.39
11 Caoutchouc	90.00	9.11	0.88		0.99	9.00
12 Splent coal	70.90	4.30	24.80		27.90	1.20
13 Cannel coal	72.22	3.93	21.05	2.08	23.68	1.30
14 Indigo	71.37	4.38	14.25	10.00	16.00	2.52
15 Camphor	77.38	11.14	11.48		12.91	9.71
16 Naphthaline	91.06	7.07	0.70?		0.79?	
17 Spermaceti oil	78.91	10.97	10.12		11.34	9.71
18 Common oil of turpentine.	82.51	9.62	7.87		8.85	8.64
19 Purified oil of turpentine..	84.09	11.05	3.06		4.00	11.01
20 Naphtha	83.04	12.31	4.65		5.23	11.73
21 Asiatic castor oil	74.00	10.29	15.71		17.67	8.33
22 Alcohol, spec. grav. 0.812.	47.85	12.24	39.91		44.09	7.25
23 Ether, spec. grav. 0.70 ..	59.60	13.03	27.01		30.05	9.09
24 Bleached silk	50.69	3.94	34.04	11.33	35.43	Oxyg.
25 Cotton	42.11	5.06	52.83		45.56	12.33
26 Flax, by Lee's process ..	42.81	5.05	51.07		49.05	7.07
27 Common flax	40.74	5.57	52.79	0.09	50.16	8.02
28 Wool	53.07	2.80	31.02	12.03	25.07	8.03

* Philos. Trans. Part II. for 1822.

TABLE OF ORGANIC ANALYSES—Continued.

Substance.	Carbon.	Hydrog.	Oxygen.	Azote.	Water.	Excess.
29 Cochineal	50.75	5.81	36.53	6.91	39.06	Hydro. 14.01
30 Cantharides	48.64	5.99	36.29	9.08	40.83	14.53
31 Urea	18.57	5.93	43.68	31.82	49.14	0.47
32 Benzoic acid	66.74	4.94	28.32		31.86	1.04
33 Citric acid	38.00	4.63	62.37		41.67	Oxyg. 25.33
34 Tartaric acid	31.42	2.76	63.82		24.84	43.74
35 Oxalic acid	19.13	4.76	76.20		42.87	38.09
36 Ferropussic acid	36.83	27.89	of iron.	35.29		

"Remarks on the preceding Analyses.—The sugar which I employed," says Dr. Ure, "had been purified by Mr. Howard's steam process, and was so well stove-dried, that it lost no appreciable portion of its weight, when enclosed along with sulphuric acid *in vacuo*. The diabetic sugar has a manifest excess of oxygen, which I believe to be the case with all weak sugars, as they are called by the sugar refiners. I consider this excess of oxygen as the chief cause which counteracts crystallization, and, therefore, the great obstacle to the manufacturer. The smallest proportion of carbon, which I have ever found in any cane sugar, was upwards of 41 per cent. The experiments on starch and gum were among the earliest which I made, and the results differ so much from those given by other experimenters, that I shall repeat the analyses at the earliest opportunity. The constituents of the above three bodies, referred to the prime equivalent scale, will be approximately as follows:—"

	Sugar.	Starch.	Gum.
Carbon . . .	5 atoms	5 atoms	4 atoms
Oxygen . . .	4	5	5
Hydrogen . .	4	4	4

"Starch is liable to a similar deterioration with sugar; that is, some species of it make a much firmer coagulum with hot water than others; a difference probably due to the proportion of oxygen. The starch here employed was that of commerce, and was not chemically desiccated: hence, the redundancy of water beyond the equivalent proportion. A little hygrometric moisture was present also in the gum, as it was not artificially dried. A note of interrogation is placed

* The following are the equivalent numbers employed by Dr. Ure in this paper:—Oxygen, 1.0; hydrogen, 0.125; carbon, 0.75; azote, 1.75.

after azote. That doubt will I trust be solved, when I complete my analysis of grains, roots, and leaves, with a view of tracing the origin of azote in the bodies of graminivorous animals. With regard to resin, I believe the quantity of its carbon to be somewhat underrated in the table. Though three experiments were made on it, I now perceive that I had omitted to retriturate and reignite; and the carbon of resin is very difficult of oxygenation. Its true composition is probably, carbon, 8 atoms; hydrogen, 8; oxygen, 1. A still more symmetric arrangement would be derived from carbon, 8 atoms; hydrogen, 9; oxygen, 1. This proportion corresponds to 8 atoms of olefiant gas and 1 atom of water; and I think it is very possibly the true constitution of resin. Had the loss of weight suffered by the contents of the tube, during their ignition, been a few hundredth parts of a grain more, the experimental result would have coincided with this theoretical view. Copal approaches to carbon, 10 atoms; hydrogen, 7; oxygen, 1. Lac may be nearly represented by carbon, 6 atoms; hydrogen, 4; oxygen, 2; or 2 atoms of olefiant gas + 1 atom carbonic oxide. Resin of guaiac gives carbon, 7 atoms; hydrogen, 4; oxygen, 2."

"Although the experiments on amber were conducted carefully with retrituration and reignition, no good atomic configuration of it has occurred to me. It approaches to 10 carbon + 10 hydrogen + 8 oxygen."

"Wax is apparently composed of carbon, 13 atoms; hydrogen, 11; oxygen, 1; or, in other words, of 11 atoms olefiant gas + 1 atom carbonic oxide + 1 atom carbon. Had the experiment given a very little more hydrogen, we should have had wax as consisting of 12 atoms olefiant gas + 1 atom carbonic oxide. This is possibly the true constitution."

"Caoutchouc seems to consist of carbon, 3 atoms; hydrogen, 2; or it is a sesqui-carburetted hydrogen. The oxygen deduced from experiment is in such small quantity, as to leave a doubt whether it be essential to this body, or imbibed in minute quantity from the air during its consolidation."

"Splent or slate coal, specific gravity 1.266, abstracting its incombustible ashes, approaches in constitution, to carbon, 7 atoms; hydrogen, 3; oxygen, 2. Cannel coal from Woodhall, near Glasgow, specific gravity 1.228, resembles a compound of carbon, 9 atoms; hydrogen, 3; oxygen, 2. In both of these bodies, there is an excess of carbon beyond the 3 atoms of olefiant gas and 2 of carbonic oxide. The former coal has 2 extra atoms of carbon, and the latter, 4 atoms. Hence this coal is found at the Glasgow gas-works to yield a very rich burning gas."

"The elements of indigo may be grouped as follows: car-

bon, 16 atoms; hydrogen, 6; oxygen, 2; azote, 1; or, in other terms, we shall have 1 atom cyanogen, 6 atoms olefiant gas, 2 atoms carbonic oxide, and 6 atoms of carbon in excess."

"I had intended to pursue, at considerable detail, my researches on this curious azotized product of vegetation, but the subject having been lately taken up, and ingeniously prosecuted by my pupil and friend, Mr. Walter Crum, I was induced to leave it in his hands. He announced to me the presence of hydrogen in indigo, before I had analyzed this substance myself; and drew my attention particularly to the fallacy occasioned by the hygrometric water of the peroxide of copper. It is likely that some slight modification may require to be made in my tabular proportion of the constituents, for I did not resume the subject of indigo, after I had become most familiar with the manipulations."

"Camphor is very nearly represented by carbon, 10 atoms; hydrogen, 9; oxygen, 1; or 9 atoms olefiant gas + 1 atom carbonic oxide. Naphthaline is, in my opinion, a solid bicarburet of hydrogen, consisting of carbon, 2 atoms; hydrogen, 1."

"It is very difficult, even by the best regulated ignition, to resolve the whole carbon of this very volatile body into carbonic acid; hence, the carbon may come to be underrated in the result." Naphthaline is obtained during the rectification of the petroleum of the coal gas-works. It is found encrusting the pipes in the form of a greyish crystalline mass; and when purified by a second sublimation at the temperature of about 220°, it forms beautiful thin plates, white and glistening. It has a powerful petroleum odour. With brine of the specific gravity 1.048, these plates, when once thoroughly wetted (which is difficult to effect), remain in equilibrium; that is, float in any part of the liquid. That number, therefore, represents the specific gravity of naphthaline. It is insoluble in water, but very soluble in ether, and moderately so in alcohol. With iodine, it fuses at a gentle heat into a brown liquid, forming as it cools a solid resembling plumbago, which dissolves readily in alcohol, and is thrown down by water. Naphthaline is soluble in oils. In water heated to 168° Fabr. it fuses, and remains like oil at the bottom of the liquid; but when stirred, it rises, and spreads on the top in little oily patches. At 180° it rises spontaneously from the bottom in oily globules, which, as the temperature is raised, dissipate in the air, undergoing motions similar to those of camphor floating on water.

"Spermaceti oil is constituted apparently of carbon, 10 atoms; hydrogen, 9; oxygen, 1; or, in other words, of 9

atoms olefiant gas + 1 atom carbonic oxide. The experimental proportion is, however, more nearly carbon, 10 atoms; hydrogen, 8; oxygen, 1. There is here an atom of carbon in excess.*

"Common oil of turpentine, specific gravity 0·888, comes very closely to the following arrangement: carbon, 14 atoms; hydrogen, 10; oxygen, 1. Oil of turpentine, purified with alcohol by Dr. Nimmo's method, seems to approach to the constitution of naphtha, or of a mere carburet of hydrogen. Its specific gravity is 0·878. But as from the mode of preparing it, a minute portion of alcohol may remain in it, I do not think it necessary to investigate its atomical structure."

"Naphtha, specific gravity 0·857, obtained by distillation from petroleum, is very nearly represented by carbon, 22 atoms; hydrogen, 20; oxygen, 1. It, therefore, consists of 20 atoms olefiant gas, 1 atom carbonic oxide, and 1 atom of carbon held in solution."

"Castor-oil is an interesting unctuous body, from its great solubility in alcohol. It consists nearly of carbon, 7 atoms; hydrogen, 6; oxygen, 1. It is composed, therefore, of 6 atoms olefiant gas + 1 atom carbonic oxide."

"Alcohol, specific gravity 0·812, is composed very nearly of carbon, 3 atoms; hydrogen, 5; oxygen, 2; or, of 3 atoms olefiant gas = 2·625, 2 water = 2·25. And in volumes, 3 olefiant gas = $·9722 \times 3 = 2·9166$; 4 aqueous vapour = $·625 \times 4 = 2·500$.

"Thus alcohol of 0·812, by the above analysis, which I believe merits confidence, from the care and consistency of the experiments, differs from M. Gay-Lussac's view of absolute alcohol, deduced from M. Th. de Saussure's experiments, in containing an additional volume of aqueous vapour. At the specific gravity ·814, alcohol would have exactly this atomic constitution. If the condensation be equal to the whole 3 volumes of olefiant gas; that is, if the 7 volumes of constituent gases become 4 of alcohol vapour, we shall have its specific gravity at this strength = 1·3722; the additional volume of aqueous vapour producing necessarily this abatement in the density."

"Fibres of the bleached threads of the silk-worm were subjected to analysis. Their composition is apparently, carbon, 10 atoms; hydrogen, 4; oxygen, 5; azote, 1; or, 4 of olefiant gas, 5 of carbonic oxide, and 1 of nitrous oxide; or of 1 atom prussic acid, 3 atoms olefiant gas, and 5 atoms carbonic oxide."

* "This is probably the truer view. The former would make it coincide with camphor."

" Cotton fibres, unbleached, seem to consist of carbon, 11 atoms; hydrogen, 8; oxygen, 10. Flax, by Lee's patent process, consists of carbon, 7 atoms; hydrogen, 5; oxygen, 6. It contains more carbon, and is therefore probably stronger than common flax, prepared by a putrefactive maceration. This seems composed of carbon, 1 atom; hydrogen, 1; oxygen, 1. But this is the theoretical representation of sugar by M. Gay-Lussac and Dr. Prout; and hence, these chemists would readily explain, how linen rags may pass into the form of sugar by the action of sulphuric acid. Wool approximates to carbon, 10 atoms; hydrogen, 3; oxygen, 4; azote, 1."

" Cochineal seems to be made up of carbon, 15 atoms; hydrogen, 11; oxygen, 8; azote, 1. Cantharides approximate to carbon, 11 atoms; hydrogen, 10; oxygen, 7; azote, 1."

" My result with urea differs so considerably in the proportion of azote from that of Dr. Prout and M. Berard, that I am disposed to doubt of the accuracy of my experiments, though they were made with the utmost care, and were most consistent in the repetition. I could perceive no smell whatever of nitrous gas in the gaseous products, which were made to traverse a column of copper filings three inches long, in a state of ignition. I shall renew the inquiry on urea, and employ the lowest temperature compatible with the formation of carbonic acid."

" The prime equivalent of benzoic acid crystals, I find by saturation with water of ammonia, to be 14.5; and it consists apparently of carbon, 13 atoms; hydrogen, 6; oxygen, 4. Of crystalline citric acid, the prime equivalent is 8.375 by my experiments; and it consists probably of carbon, 4 atoms; hydrogen, 3; oxygen, 5; or, of 4 atoms carbon, 3 water, and 2 oxygen. Two of these atoms of water are separated, when citric acid is combined with oxide of lead in what is called the dry citrate. Hence, the acid atom is in this case 6.125. The prime equivalent of crystalline tartaric acid is 9.25 by my results; and it seems made up of carbon, 4 atoms; hydrogen, 2; oxygen, 6; or of carbon, 4 atoms; oxygen, 4; water, 2. From my experiments I have been led to conclude, that into dry tartrate of lead these two atoms of water *do* enter as a constituent; and hence, that the crystals of tartaric acid are as dry as is compatible with its constitution. Oxalic acid crystals have 7.875 for their prime equivalent, and are composed of carbon, 2 atoms; hydrogen, 3; oxygen, 6; or of 2 atoms carbon, 3 oxygen, 3 water. Into the dry oxalate of lead, these 3 atoms of water *do not* enter. Hence I find the dry acid to be composed of carbon, 2 atoms; oxygen, 3; or, of 1 atom carbonic acid + 1 atom carbonic oxide, as was

first suggested, I believe, by Dobereiner. Crystallized oxalate of ammonia consists of 1 atom acid, 1 atom ammonia, and 2 atoms water, = 8.875. By a gentle heat, 1 atom of water may be separated; and an oxalate of ammonia, as dry as is compatible with its neutrality, remains."

Amongst the most interesting detached observations, in this branch of science, which have lately come before us, we may notice the discovery of a new acid, the *pyro-citric*, by M. J. LASSAIGNE.* This acid is produced by the distillation of citric acid; it is white, inodorous, and of a strongly acid taste, and generally occurs in a white mass, composed of fine small needles. It melts on a hot body, and is converted into very pungent white vapours, leaving traces of carbon. It is very soluble in water and in alcohol. At 50° of Fahrenheit, water dissolves *one-third* of the weight of it. It is composed of, carbon, 47.5; oxygen, 43.5; and hydrogen, 9. With the oxides it forms salts, which differ in their properties from the citrates; of these M. Lassaigue has examined the *pyro-citrates* of potash, lime, barytes, and lead.

Another new acid, the *hydro-carbo-sulphuric acid*, which has the same relation to sulphuret of carbon that hydrocyanic acid has to cyanogen, has also been discovered by Dr. ZEISE, of Copenhagen.† The compounds of this acid have been called *hydro-carbo-sulphates*. The acid itself may be procured by pouring a mixture of four parts of sulphuric acid, and three of water, on the salt of potash, and adding much water in a few seconds. The acid collects at the bottom, in a transparent slightly coloured oil, which must be freed from sulphuric acid by washing. Its taste is acid and astringent. It reddens litmus paper. It burns readily, giving out sulphureous fumes. Its odour differs from that of sulphuret of carbon, and it is decomposed by heat.

A new compound of *iodine*, *hydrogen*, and *carbon*, has been found, by M. SERULLAS, to result from the saturated solution of iodine in alcohol of at least 39°. It consists of small pearly scales, of a sulphur yellow colour. It is friable and soft; it diffuses, when rubbed, an aromatic odour. It is decomposed at a slight elevation of temperature. Water dissolves a very little of it, while it is very soluble in alcohol.‡

A new compound has also been found, by M. VAUQUELIN, to arise from the combination of 100 parts of oil of turpentine, in volume, with 20 parts of alcohol. It does not become turbid by water.¶

A new fluid of a singular nature has been discovered by

* Journal de Pharmacie, Oct. 1822.

† Ibid. Mars, 1823.

‡ Ann. de Chim. Vol. XX. p. 245.

¶ Ibid. Vol. XIX. p. 279.

Dr. BREWSTER in the cavities of minerals.* It possesses the remarkable property of expanding about thirty times more than water. It is also distinguished by its extreme volubility, adhering very slightly to the sides of the cavities which contain it, and is likewise remarkable for its optical properties. It exists, however, in quantities too small to be susceptible of chemical analysis.

LEGAL MEDICINE.—The chief performance which has come before us, in this department of the present sketch, is the work of Dr. PARIS and Mr. FONBLANQUE on medical jurisprudence.† As a review of this work will appear in our next Number, we will not now occupy our confined limits with any observations respecting it.

The experimental inquiry of Drs. CHRISTISON and COINDET,‡ on poisoning by oxalic acid, is the most interesting and important of its kind which has appeared for a considerable time. The effects of this poison on the animal economy observed by these inquirers, especially its action on the tissues of the stomach, may be stated, as preliminary to the means which ought to be adopted, in order to detect its presence.

“1. Concentrated oxalic acid renders the mucous epidermis brittle and less adherent. It dissolves the other coats; but during life, this action never extends beyond the surface of the corion, and seldom so far; hence its action on the living system is more like that of the pure irritants, producing extravasation of blood within the tissues, and into the cavity of the stomach, and little chemical decomposition.

“2. But its action on the dead stomach is so rapid, that, if the examination of the body be delayed a few minutes, the whole corion, and even the other coats, will be found dissolved; and the diluted acid will also have the same effect, though more slowly. Hence it is easy to explain why Mr. Thomson, in his experiments, found so much apparent corrosion. In fact, he always allowed an interval to elapse sufficient for the acid to act extensively on the dead tissues.

“3. The chemical action of oxalic acid is not owing, as Mr. Thomson conjectures, to mutual decomposition of the acid and stomach: it is one of pure solution, in which the acid and the animal principles of the tissues remain unaltered.”

* Edinburgh Philosophical Journal, April, 1823.

† Medical Jurisprudence. By J. A. Paris, M. D. F. R. S. F. L. S. Fellow of the Royal College of Physicians; and J. S. M. Fonblanque, Esq. Barrister at Law. In 3 vols. 8vo. London, 1823.

‡ Edinburgh Medical Journal for April, 1823.

Additional experiments proved that dilution increased the deleterious effects of this poison; and that death followed more speedily, and without leaving any cognizable trace of organic change in the stomach, after its exhibition in this state. With respect to the mode in which it operated its fatal effects, Drs. Christison and Coindet are of opinion that it organically deranged the stomach, and that the nervous and vascular systems were soon afterwards sympathetically affected. When, however, no signs of lesion of the stomach could be detected, they consider that it acted upon the other parts by absorption, although they could not detect the acid in any of the circulating fluids. Their experiments are, in this particular point, at variance with those of Mr. A. T. THOMSON* and Mr. PERREY, who discovered the acid in the blood.

Drs. Christison and Coindet further are of opinion, from the evidence obtained from their experiments, that the spinal cord and the brain were affected primarily, and that the heart and lungs were deranged secondarily by this poison through the effects produced by it on the nervous system, which effects they consider to have been of a sedative nature.

With regard to the subject more immediately under consideration, namely, the means of detecting this acid, in cases wherein there is reason to believe that it may have been employed with a criminal intention, Drs. Christison and Coindet have given the following directions:—

“The stomach is to be washed with pure water, and if disorganized, preserved for analysis. The washings, the contents of the stomach, the vomited matter, and the disorganized tissues and suspected articles of food, are to be boiled separately, a little pure water being added if necessary. If chalk or magnesia has been used as an antidote, what remains on the filter (except that from the tissues) is to be preserved for analysis. The filtered fluid is to be tried first with litmus paper, and then by the three following tests—the hydrochlorate of lime, the sulphate of copper, and the nitrate of silver.

“1. Decolorize the fluid, if necessary, with chlorine. The hydrochlorate of lime, dropped into a solution containing oxalic acid, or an oxalate, especially the latter, throws down an insoluble oxalate of lime. But it also precipitates with the carbonates, sulphates, phosphates, tartrates, citrates, and with all their acids but the carbonic. The following mode of procedure will serve to distinguish it from these substances. The nitric acid will not take up the sulphate of lime, but a

few drops of it dissolve the oxalate. The hydrochlorate acid will not dissolve the oxalate, unless added in very large quantity, while two or three drops will take up the carbonate, phosphate, tartrate, or citrate.

" 2. Decolorize a second portion of the fluid with chlorine. The sulphate of copper precipitates oxalic acid bluish-white, and the oxalates pale blue. This is a test sufficiently delicate, especially if any free oxalic acid is previously neutralized with potass; and it is also a very useful one, since the sulphate of copper does not affect fluids that contain sulphuric, hydrochloric, nitric, tartaric, citric acids, or their ordinary salts. But it precipitates the carbonates, and throws down phosphoric acid, whether free or combined. The oxalate, however, is easily distinguished; for it is insoluble in hydrochloric acid, while a few drops of that acid at once take up the phosphate or carbonate.

" 3. The nitrate of silver produces a heavy white precipitate with oxalic acid, and still better with the oxalates; and this precipitate, when dried and heated over a candle, becomes brown on the edge, then of a sudden fulminates faintly, and is all dispersed in white fumes. When impure, it deflagrates like gunpowder, and when in too small quantity to be collected, the filtering paper burns, as if steeped in nitrate of potash. This is a very characteristic and delicate test. From a quarter of a grain of oxalic acid dissolved in 4000 parts of water, we have procured enough of the powder to show its fulmination twice. The precipitation alone cannot be trusted to; for it may equally take place with hydrochloric, phosphoric, citric, or tartaric acid, and likewise with the alkalis. But when the test of fulmination is tried, there is no chance of its being confounded with any of these, except, perhaps, with the tartaric and citric acid. The compounds of these acids with silver, we find, possess properties, that will render the nitrate of silver one of the simplest and most correct tests for distinguishing them from each other, and from oxalic acid. The nitrate of silver becomes brown under exposure to heat, froths up, then deflagrates slightly, with the discharge of white fumes, and a large quantity of dull, ash-grey, crumbling matter remains, of a very peculiar fibrous structure. The tartrate of silver becomes brown, and froths up like the citrate, white fumes are discharged without even deflagration, and there is left an ash-coloured botryoidal mass, encrusted outwardly with silver.

" If magnesia or chalk has been given as an antidote during the patient's life, the oxalate of magnesia or lime may be mingled, in the form of powder, with the contents of the stomach, or with the vomited matter. The powdery matter

is then to be separated by elutriation from what remains upon the filter during the previous process. If magnesia has been the antidote employed, it is only requisite to boil the powder in pure water for a few minutes, and then subject the filtered fluid to the three tests described above. For the oxalate of that earth is sufficiently soluble to furnish, even with a single ounce of water, a solution in which all the foregoing characters may be observed. If the antidote employed has been chalk, then the powder is to be boiled for fifteen minutes, with half its weight of pure subcarbonate of potass, dissolved in 20 or 30 parts of water. A mutual interchange then takes place, and the solution contains oxalate and carbonate of potass. In applying the tests to this solution, the free alkali is to be previously neutralized with hydrochloric acid, when hydrochlorate of lime or sulphate of copper is to be used, and with nitric acid, before using the nitrate of silver. In the last case, there ought to be as little excess of acid as possible, because the oxalate of silver is soluble in nitric acid."

The examination of the body of a female who hanged herself led M. ESQUIROL* to offer some important observations respecting the fallacy of the formerly acknowledged signs of this act. In that instance the cord was removed soon after the extinction of life; its traces around the neck were then not deep, and the skin was not discoloured; the body still preserved all the traits of life. Twenty-four hours after the act, there was no ecchymosis around the neck; and the sugillation observed at the instant of death had disappeared at the time of opening the body. The natural appearance of the countenance was at that time but little altered; the skin, which had become smooth where the impression of the cord had been, was neither livid nor ecchymosed, but as if it were burnt. The meninges of the brain were very little injected, the brain not at all; the lungs and heart were void of blood; the right ovary was alone gorged with black blood. From these appearances, it would have been concluded by those who were guided by the diagnostics of some writers on medical jurisprudence, and who knew not the circumstances of the case, that suspension had been committed *after* death. The reason of these erroneous diagnostics are, first, that it has been generally supposed that hanging and strangulation produce apoplexy; and, secondly, that those bodies which have been suspended for a considerable time, and on which the cord has consequently remained until after the body has become cold, have only been examined.

* Archives Gén. Jan. 1823.

M. Esquirol has therefore concluded :— 1st, That the diagnostic signs laid down by writers on this subject, to distinguish suspension before and after death, are by no means sufficiently precise to be trusted. 2d, That ecchymosis around the neck is but an equivocal sign of suspension before death. 3d, That when a Practitioner is called to examine a body which has been found suspended, he ought to reckon as nearly as possible from the hour of death, and the time the cord has remained round the throat, as these two circumstances must be the foundation of his judgment on the case.

For a full disquisition on that part of *legal medicine* which relates to midwifery, we refer our readers to our Numbers for January, February, and March. They will there find some of the points most important to the medical Practitioner, especially the subject of infanticide, brought before them in such a manner as to supersede, in most instances, any farther reference respecting it. — Several very interesting occurrences have been also recorded, in some of the late Numbers of this Journal, which are intimately related to forensic medicine. Amongst these Mr. OLLIER's case of poisoning by means of *nux vomica* is particularly important,* inasmuch as it illustrates the effects of this substance on the animal economy, and shows the very sudden and rapid manner in which it produces its deleterious effects, after the deceitful calm which for a time follows its exhibition. The particular condition of the body for a considerable time after death, as well as the symptoms which evince its action on the living body, are sufficiently diagnostic of the ingestion of this substance. We can only refer our readers to the case of M. TACHERON,† wherein the *nux vomica* was taken in a much smaller quantity than in the preceding case.‡

* REPOSITORY for June, 1823.

† Ibid.

‡ We may remark that but little dependance can be placed on any means which have been yet tried for the treatment of poisoning by *nux vomica*, unless the treatment be commenced before the tetanic symptoms have been produced, or unless the dose of this poison has been small. Some of the most active emetics have been found unsuccessful, and have even appeared to aggravate the symptoms, while, on the other hand, the most gentle means, as in the case of M. Tacheron, has produced copious vomiting. The only certain method, therefore, of evacuating the remaining poison from the stomach, is the mechanical apparatus mentioned in a late Number of the REPOSITORY (Vol. XVIII. p. 362).

Those remedies which have been supposed by some to be antidotes to the deleterious action of *nux vomica*, or strychnine, without sufficient evidence derived from experience in such cases, have been found either altogether inefficacious or in some degree hurtful, from the cir-

We have so far exceeded our intended limits, that we can only refer our readers to previous Numbers of the *REPOSITORY* for the very interesting cases of poisoning by arsenic* and by corrosive sublimate,† published by Mr. BUCHANAN. The instances, also, of poisoning, by means of the *digitalis purpurea*,‡ by the *anranthe crocata*,|| and by the *solanum dulcamara*,§ detailed in some of our late Numbers, will not be found devoid of interest.

J. C.

Jermyn Street, St. James's, 5th July, 1823.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Observations on the Modifications and Treatment of Marasmus.
By a PHYSICIAN to a Public Dispensary.

THOUGH the diseases of children appear to have occupied the attention of late medical writers more than formerly, and though they are generally, doubtless, better acquainted with them, yet too many instances of inefficient or injurious practice must occur to every Physician to render fresh dissertations useless. Neither altogether are these to be blamed if they contain nothing absolutely new nor unknown before; for amidst the great mass of medical works that issue from the press, a few only can meet the eye of each individual, and it may happen that those which evade his attention may have a powerful claim upon it, from their practical utility. With this impression on my mind, it has not appeared entirely without its use to make some observations upon that disease of children which has been variously named

cumstance of their aggravating the effects of the substance against which they were administered.

We stand in need of more facts on the subject before any opinion can be offered with propriety as to what ought to be done, or not to be done, in the treatment of cases of poisoning by this substance.

* *REPOSITORY* for April, 1823.

† *Ibid.* for May, 1823.

‡ *Ibid.* for January, 1823.

|| *Ibid.* for April, 1823.

§ *Ibid.* for May, 1823.

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marasmus, verminatio, febris infantum remittens, &c. Some doubt, perhaps, may exist, whether the latter disease be the same with the two former; but whoever will consider the histories of the infantile remittent of children can scarcely fail to perceive its coincidence with the disorder to which Dr. Hamilton and Dr. Ayre have given the name of *marasmus*.

The symptoms of *marasmus* differ in some way according to the age of the child. In young infants, it will often chiefly show itself by dulness and great unwillingness to be tossed about. From being manageable and crying little, the patient is perpetually whining, and it is impossible to engage its attention for more than a few minutes. The face becomes pallid and leucophlegmatic, occasionally, however, lighted up with a hectic flush. The feet and hands burn, and even if the child sleeps, it is restless, tossing about in the bed and moaning frequently. The appetite varies, being sometimes even voracious, and at another loathing every kind of food. The bowels are irregular, and the dejections unnatural, sometimes greenish and what the nurses called griped; at another, when there is nothing improper in the colour of the *fæces* at first sight, minuter examination shows it to be covered with a semi-pellucid jelly-like matter, apparently being merely the effects of an increased secretion from the internal surface of the bowels; occasionally the *fæces* are very black, but this occurs more frequently after opening medicine than at any other time, and it may perhaps be in some measure attributed to the remedy. Whatever may be the appearance of the *fæces*, they are always exceedingly offensive. The bowels are not always much enlarged nor hard; and, indeed, frequently it would be impossible to perceive any difference in the feeling and appearance of the abdomen from its state in perfect health. As this disease often occurs during the time of dentition, it has not unfrequently been attributed to this cause, and it is undoubtedly not seldom aggravated by it; but, upon the whole, I am much more inclined to refer the severity of the symptoms which attend dentition to the previous bad state of the health than the reverse. The wasting of the muscular flesh is not so marked in very young children as in those of more advanced age, to whom the description of Dr. Hamilton more particularly applies.

In children of four or five years of age, besides the above symptoms, it is not unusual to observe a palsy of the lower extremities supervene, when the disease has continued a considerable time, while no derangement can be observed in the course of the spine. In the earlier stages of the disease, however, older children have more distinctly the symptoms

referrible to worms, such as cough, sometimes merely dry and hacking; at others, occurring in severe paroxysms, and attended with expectoration, itching of the nose, and of the fundament, dry and scaly, sometimes swelled lips, and protuberant and hard abdomen. If the disease takes place in children who are just beginning to walk, they are frequently taken off their legs, and even those who may have walked firmly for a month or two, will totter and require to be carried. It would appear that the earth of bone is often not sufficiently deposited, for it is during this state that I have seen the bones of the legs most frequently curved.

The general cause of this disorder has undoubtedly its place in the *primæ viæ*, through which, perhaps, the secretions of the liver may, as Dr. Ayre inculcates, become vitiated, together with the other glands which contribute to perfect digestion.

The treatment of this disease has varied very much; by Dr. Hamilton purgatives almost entirely have been employed and recommended. Dr. Ayre gives minute doses of calomel, and, as he states, with the greatest success. Those who have been brought up in Mr. Abernethy's school confine themselves to *hydrargyrum c. cretâ* and jalap and calomel, while the old nurses, to whom in this country most of such cases are confided, give rhubarb in different forms. It seems impossible that these plans could have been pursued or recommended if success had not attended them; and it appears to me chiefly necessary to point out the different states of the disorder to which the various remedies are applicable.

In the very early stages of this disorder, a brisk purgative, or a repetition of purgatives, every other day, will frequently remove it; but when we speak of the early stages of this or any other disorder, it must be referred rather to the order of symptoms than to time: for it will often happen, that the progress of the complaint will be very various in equal spaces of time in different patients. In one it will long be merely observable in a want of animation and general sluggishness, while the alvine evacuations are offensive and improperly formed. In another case, and no longer time, it shall be accompanied with cough, considerable emaciation, large protuberant and hard abdomen, and great debility. The enlarged abdomen, however, does not seem peculiar to the latter stages of marasmus, in which it is frequently wanting, until effusion or organic disease of the mesenteric glands has taken place. But in this case, the tumour is either soft and giving a sense of fluctuation to the touch, or irregular and tuberculated — two states which cannot possibly be mistaken

for that kind of tumour which arises from constipated bowels. When, from investigation, we find reason to believe that the enlarged abdomen is accompanying the early stages of the disease, and before there is any threatening either of hydrocephalus or organic disorder of the abdominal cavity itself, we may almost promise a speedy removal of the symptoms by the use of purgatives. In prescribing these remedies for children, it is essential to bear in mind that they will usually bear and require proportionably larger doses than older people, and that the first dose or two must be stronger than what will afterwards be necessary. From the nature of the discharges after purgatives, it seems probable that this arises from the bowels being lined by more mucus than natural, and thus preventing the action of the medicine upon their internal tunic.

Case 1st.—June, 1818. William Langford, ætatis six, the only surviving child of a large family, who by report had died of marasmus; affected with headach, slight hacking cough, dullness, frequent hectic flushes, and great restlessness; pallid countenance; had fallen away within the last fortnight; abdomen protuberant; bowels costive; pulse weak. Purgatives, with jalap and calomel, six grains of the former to two of the latter, repeated on alternate days for a fortnight, restored this patient to health; but it has been necessary to repeat them from time to time, as symptoms have recurred. I saw him about a year ago, when he was strong and healthy.

Case 2d.—October, 1822. Joseph Smith, ætatis eleven; symptoms of marasmus, combined with an eruption of porrigo on the face; tongue furred with elevated red papillæ; pulse feeble and quick; bowels protuberant, hard, and generally costive. The mother had in this instance given calomel and jalap *occasionally*, but without much relief. Purging with jalap, gr. iv.—pulv. scam. gr. iv.—hydrarg. submur. gr. ii.—continued on alternate days for six weeks, restored the health of this patient, and removed the porriginous affection. The matter removed from the bowels in the early part of the disease was slimy, green, and extremely offensive; and for the first fortnight nothing like natural fæces passed.

Case 3d.—October, 1822. Bromfield Kerry, ætatis nine; general symptoms of marasmus; large abdomen; bowels alternately costive and relaxed; appearance strumous; had been poorly for six weeks. Purgatives removed much offensive matter, and he was dismissed cured in the course of a month.

In these cases the disease had been but of short duration;

and there seems little doubt, but that the first case would quickly have terminated fatally, as the former instances had done, if it had not been arrested in its early stages. The second case shows the combination of marasmus with porrigo; and I may strictly say, that I have never known a single example of this eruption without affection of the general health; and, indeed, the directions which Dr. Bateman has given for the treatment of the disorder seem to prove that he had a similar opinion. Still, however, though not in the case before us, local applications are, for the most part, necessary, in addition to the general treatment.

There are, perhaps, very few instances of marasmus in which it is not advisable to commence the treatment with the exhibition of purgatives, though it may not always be safe to rely upon them solely for a cure. And here great caution is necessary not to be deceived by the report of the parents with regard to the bowels: it is no unusual thing to be told that the child is extremely relaxed, and that the bowels are moved seven or eight times in the course of twenty-four hours, when stricter inquiry shows, that though the child makes frequent attempts, little or nothing passes away. Here it can scarcely be necessary to observe, that purgatives must be absolutely required; and, indeed, no other means can be advantageously employed till the bowels have been cleared out. Even, however, where diarrhoea really exists, much matter will still remain upon the bowels; and though the more powerful purgatives, as calomel and scammony, might be injurious, it is quite essential to give something which may effectually dislodge the offending matter. When this lies, as it generally does, in the lower part of the alimentary canal, glysters, with oil of turpentine, will be a powerful assistance, and will most completely destroy any ascarides which may be present, and which so usually accompany the disorder. As an aperient medicine, under such circumstances, nothing can be found more beneficial than castor-oil; and disagreeable as this drug is to most adult persons, it is not often refused by young children. When diarrhoea attends marasmus, the dejections will for a long period consist of nothing but a dark-coloured slimy and offensive matter; and if occasionally a more natural evacuation should appear, it is quickly superseded by these diseased secretions. After the exhibition of castor-oil, a great quantity of small black pellets, resembling sheep dung, are usually expelled, and it will require frequent repetition before they entirely disappear. Sometimes when this is effected the disease vanishes, but much more frequently considerable derangement of the animal functions continues; the cough, bad

appetite, furred tongue, and restlessness, remain, and demand additional treatment. If, under these circumstances, purgatives be persisted in, the disorder is only increased, the debility and emaciation are augmented, and death speedily closes the scene.

When diarrhœa continues, the hydrargyrum c. cretâ, with two or three grains of rhubarb, twice a day, is a very useful medicine; and I have found, the diarrhœa being previously stopped, the infusions of camomile and rhubarb, given in such proportion as to ensure a tonic effect, particularly serviceable, with one or two grains of calomel, at first every day, and afterwards only every other day.

Case 4th.—November, 1822. Mary Ann Parkes, ætatis ten, for three years had been observed at times to be poorly, varying very much, with general bad appetite and great restlessness at night; she had lost much flesh, but more especially within the last few weeks; countenance pale; abdomen little if at all prominent; tongue furred; pulse weak; bowels alternately costive and relaxed. Purgatives removed a great quantity of green slimy matter, but without any corresponding relief to her general state.

R Hydrarg. Submur. gr. ii.

2ndâ quâque nocte sumenda.

R Infusûs Rhei, Infusûs Anthemidis, āā ziv.
pro haustu ter die sumendo.

Under this treatment she quickly regained a good state of health, and was dismissed cured at the end of a month.

This case is an evident proof that much general weakness may remain after the original cause of the disorder has been removed, and that a tonic treatment will be necessary to ensure a complete restoration to health. With regard to the choice of medicines, I cannot, I trust, be misunderstood as to recommend those only which I have been accustomed to prescribe myself, but merely to indicate the principle upon which the curative plan is generally to be conducted. How far Dr. Ayre's mode of giving small doses of calomel alone may succeed, I am unable to say, as I have never found it necessary to recur to it.

There is still another modification of marasmus, which is attended by worms, and more particularly the lumbrici. When Dr. Bateman changed the term verminatio in his reports to that of marasmus, because the symptoms which indicated the presence of worms were not peculiar to them, he announced a fact of very great importance in a pathological point of view. But it is to be regretted that he did not go farther; for there seems to me little question, not only that the symptoms are not peculiar to worms, but that these

may be completely removed without the removal of the diseased state. The truth is, that worms are never generated in a healthy state of the body, and that they ought themselves to be considered rather among a series of symptoms of a peculiar disorder, than as the essential and sole cause. And this view of the subject is highly important as it regards practice; for if when no more worms are expelled we consider every thing done, or if we persist in treating for the worms because the symptoms which are supposed to indicate them have not disappeared, we shall probably equally fail in our purpose. Undoubtedly, as foreign and irritating bodies, it is most necessary to remove these parasites, but it is not less necessary afterwards to correct that state of the system in which they were originally generated. This opinion of the nature of the disease in which worms are found is not, I believe, original, though it seems but rarely adverted to, and I have seen somewhere (though I cannot now recover it) a paper in which mercury was persevered in with success, upon this principle.

Case 5th.—April 8, 1822. William Haurey, ætatis five; affected with symptoms of marasmus, cough, itching of the nose and anus, protuberant abdomen, &c.; often passes large pieces of tape-worm.

R Hydrargyri Submur. gr. iv.

Pulv. Jalapæ, gr. v.

pro pulvere 2ndâ quâque nocte sumendo.

R Olei Terebinth. ℥iiss.

Gum. Acac. q. s.

Aq. Puræ, ℥viss.

optimè tere et misce; sumat coch. ii. largâ 2ndo quoque mane.

He continued this plan till the 26th, having passed several yards of the worm at first, but none for the last week. The dejections were slimy, dark-coloured, and offensive, mixed with a considerable quantity of a substance resembling the white of egg. For the last two days, the fæces have been more natural in appearance.

R Infusûs Anthemidis, Infusûs Rhei, āā ʒiv.

Potassæ Subcarbon. gr. v.

pro haustu ter die sumendo.

He continued this for a fortnight or three weeks, and was dismissed cured. I have heard of him within the last three months, and he continued well. I ought to have observed, that he remained very poorly and weak after there seemed reason to believe that all the worms were expelled.

With respect to the morbid anatomy of marasmus, very little information is to be acquired, since it seldom proves

fatal while in its simple form. The most usual organic derangement appears in the mesenteric glands, which are often enlarged and scirrhus, more or less, broken down, and in every way having the appearance of scrofulous tubercles. On one occasion, in which an opportunity was afforded of examining a patient of four years old, no disease whatever of the abdomen was discovered, except, perhaps, a very contracted state of the sigmoid flexure of the colon. The pericardium was firmly united to the heart in every part, but there had been, I understood, no symptoms of disease of that organ during life. The symptoms which distinguish marasmus are not unfrequently also the pretursors of hydrocephalus; and if this disease ensues, of course the chief disease will be found in the head, though, as is well known, the abdominal viscera are also frequently found to have undergone some change.

In the above observations on marasmus, I have not had it in contemplation to give any thing like a complete essay upon the complaint, but merely to point out some of those circumstances which I have found useful in a considerable experience of it. I might easily have extended the paper by a greater enumeration of cases, but it appeared to me fully sufficient to give such instances as would illustrate the points I had in view: if what has been stated be correct, one case will be sufficient to exemplify it; if incorrect, a hundred cases could not make it true.

II.

A Case of what may be called Venous Congestion of the Lungs.

Communicated by CHARLES T. HADEN, of Sloane Street, Surgeon to the Chelsea and Brompton Dispensary, &c.

WE are still but imperfectly acquainted with the true nature of those peculiar cases of disease which are so well described in Dr. Armstrong's works under the name of congestive fever. The almost paralysed state of the nervous system, the cold and often blue state of the skin, the oppressed breathing, the cold clammy perspiration, and the great depression both of the pulse and of the general bodily powers, form sufficiently remarkable characteristic symptoms of this disease; but the peculiar organic lesion which produces these symptoms, or by which they are at least always accompanied, has not been clearly pointed out.

It is well known, indeed, that this train of symptoms is never present without being accompanied by some peculiar

local affection ; and in a large majority of cases this local affection appears in the form of a loaded or congested state of the capillaries of some bodily organ ; but it is not so certainly known, in all cases, whether the congestion be in the capillary arteries or in the capillaries of the veins. It has been ascertained, too, that all these symptoms are not present in one and the same case, and that the grouping of them depends on the peculiar organ which is congested. Thus it is remarked, that when the disease is induced by a blow on the head, as when it forms the state of concussion, the symptoms are materially different from those which characterize it when it is produced by any of the causes of fever : rigors, for instance, are present in the one case ; in the other not. So also when, on the other hand, the lungs are congested, the blue state of the skin, the affection of the breathing, and the rapid destruction of the powers of life, and often, indeed, of life itself, give the case a materially different aspect from what it assumes, either when it is clothed in the symptoms which characterize so many forms of the late epidemic cholera of India, or in cases where it produces insensibility and convulsions, or when it is induced by the stomach being oppressed by indigestible food.

The same enlightened and indefatigable observer of disease, Dr. Armstrong, has pointed out many other peculiarities which characterize the state called by him congestive fever, and by which the local organic lesion with which it is connected may be determined. One of them, however, deserves to be noticed particularly here, because it refers to the particular subject of the present paper, and shows that the causes by which the nervous energy, as it is called, is depressed in cases of congestive fever, may be indirect as well as direct. Dr. A. has found, that in very many cases of the typhus fever of London the bronchial lining becomes coated by a species of tenacious varnish, which, by mechanically preventing the blood in the capillaries of the pulmonary artery from being exposed to the action of the air in the bronchia, interferes with the proper decarbonization or oxydation of the blood, whichever it may be. When this occurs, the heart ceases to be supplied with arterial blood, and venous blood circulates in its stead ; and late observers have abundantly proved that the bodily powers are immediately depressed, and life even rapidly lost in such cases.

It is this mechanical action of such causes as interfere with the due purification of the blood in the lungs which gives the peculiarity of the symptoms of bronchitis when severe, or rather when extensive, and which cause the often sudden death of patients while labouring under that disease.

In ordinary cases, so small a part of the bronchial membrane is inflamed or put *hors de combat*, that the changes in the blood still go on in a sufficient degree; but if a large portion of the whole membrane be inflamed, and especially if any thing like the whole of it be inflamed, death certainly and often very suddenly takes place. Thus an infant, who had suffered for three days from mild bronchitis, along with its brothers and sisters, suddenly became worse, and died in a few hours, in spite of treatment, with a blue and cold skin, with the bodily powers intensely depressed, and the breathing most laborious. Thus, too, a second infant, who almost at once fell into this state from a state of health, was saved by the warm bath and by emetics; the blue state of the skin and the other symptoms disappearing as the arterial action was re-established by these remedies.

In like manner, if the capillaries of the lungs be suddenly overwhelmed with blood by any cause, so that the circulation through them be impeded, the same effects follow. Many cases of sudden death are to be attributed to this state of disease; and it is probable that a late celebrated Anatomist lost his life in this way. The following case also is one in point, and it is valuable on account of the distinctness with which the previous history of the case and the consecutive symptoms illustrate the seat and nature of the affection:—

Case.—June 1st, 1823. A rather elderly woman was found in the agonies of death. Her skin was blue and cold, her eyes blanched and turned up, her pulse nearly imperceptible, and her respiration as if it were not drawn lower than the top of the sternum. She was in the ninth month of her fourth pregnancy. She had complained much latterly of deranged health, especially as regarded her stomach, and she had called up her midwife on the preceding night, on account of intense abdominal pain. Her neighbours were now, however, called into her room at four in the morning by her sudden and violent screams. They found her lying on her belly, and the child born dead. The medical Practitioner saw her immediately after this; and whilst he could not but remark the hideous appearance of her countenance, especially as produced by the contrast as to colour between her eye and skin, and felt some hesitation on account of the patient's apparently impending dissolution, he was surprised to feel his arm pulled by the patient with considerable force, and to hear her reproach him, in an almost inarticulate whisper, for delaying to give her assistance.

He gave her frequent teaspoonsful of tinct. aloes c. (the only cordial at hand), set open the window (the room being very hot), and opened two or three veins. At first he could not

obtain blood ; but by degrees he pumped out about twelve ounces, and with much relief, for the patient's countenance brightened and became less blue as the blood flowed. The pulse also was rendered more perceptible ; it, indeed, became labouring and even resisting.

Nine in the morning. — The patient saved from death, but the congested state still continuing: V. S. in several places by an assistant, but ineffectually.

Eleven at night. — Still the same state. V. S. ad 3xij. with much difficulty, though with great relief.

It should be stated, that soon after the attack commenced the patient became so hoarse that her voice was nearly lost ; she only spoke in a whisper.

June 2d. — The patient was better in every respect ; but she now complained of pain all over the chest, especially in the left side low down, and towards the front. Gradually cough came on, or rather that state in which the patient is very desirous of coughing, but has scarcely the power to do so. Her skin still, however, continued cold, and especially her feet ; but the colour of the skin was natural, and the pulse under 80. Low diet was strictly enjoined.

4th. — Has continued to improve, so as to appear nearly well ; except that her voice remains a whisper, and the pain, cough, and difficult breathing, still continue nearly as before. Her skin has never been hot, nor has her pulse risen. The skin, indeed, has been throughout rather too cold.

The patient said that she remembers nothing after the labour pains became very bad, except that she turned on her knees as she had done in previous labours.

She was now considered to be convalescent ; but the purgative medicine which she had previously taken daily was continued, and a continuance of the low diet strictly enjoined.

On further inquiry after this patient's recovery, it appeared that for some time before delivery she had suffered from difficulty of breathing and other embarrassment of the chest, so as especially to prevent her from going up stairs without difficulty.

The hot-air bath would have been very advantageous in the treatment of this case.

Derby, June 15, 1823.

III.

On the Effects of Irritating Substances on the Functions of the Intestines, when rubbed along the lower Regions of the Spine.
By JAMES KING, Esq. Surgeon.

WHEN perusing the 104th Number of the REPOSITORY, I was struck with the novelty of some opinions stated in a very excellent paper on the "nature and treatment of fever," by Dr. Wight. When speaking of the efficacy of purgatives in fever, he says "that it is a fact well established that a sinapism or a blister applied to the dorsal region of the spine will often excite the bowels to action, when the most powerful cathartics fail to produce such effect. It is proved, too, that cathartic substances, mixed with the common volatile liniment, and rubbed along the spine three or four times a day, will maintain a regular action of the bowels, after a course of cathartics, most assiduously administered, prove unsuccessful." Were it satisfactorily proved that purgatives, when prescribed in this way, were uniform in their operation, the advantages to be derived, in particular cases, would be great indeed, where, from irritability of the stomach or other circumstances, we were disappointed in obtaining beneficial effects from their internal exhibition.

The following effects produced by the external application of tartar emetic, which to me at the time of their occurrence appeared of considerable interest, go to corroborate Dr. Wight's opinion as quoted above.

— M'Gregor, a young man, aged twenty-five, was seized, during the month of April, 1821, after exposure to cold, with a severe rheumatic affection of the dorsal portion of the spine, for which bleeding and the other remedies usually found of service in similar cases were resorted to without any benefit; by the advice of a medical friend, I was induced to rub tartar emetic ointment on the surface of the part affected. Two days after the first application of this ointment, he informed me that he had been troubled during the night with a severe purging, which he attributed to the rubbing. At the time, not being aware that tartar emetic, when applied externally, would produce such effects, I ridiculed the idea, and attributed it to some derangement of the alimentary canal. I ordered the ointment to be continued till next day, when I was informed the purging had been still more severe than it was before last visit. I now began to suspect that the emetic tartar might be received into the system by means of the absorbents, or act through

the medium of the nerves, so as to produce this effect; but to obtain a more satisfactory proof, I ordered it to be discontinued for three days, during which time the bowels returned to their natural action, as he had only one stool each day. I again commenced the use of the ointment, and again it exerted a similar influence over the alimentary canal, which obliged me to give up its use entirely.

— Hamilton, a boy, aged thirteen, some time in the month of September, 1821, felt, for the first time, pain and weakness of the back and difficulty of walking, which, along with other symptoms, became more and more severe, and at length terminated in a very bad case of diseased spine. He was repeatedly blistered, and an issue kept open for six months on each side of the diseased bone; which, though it had produced little or no benefit, would have been allowed to discharge a longer period had it not been for his friends, who, by the advice of some ignorant person, would not allow it to be kept open any longer. As soon as it was completely cicatrized, I rubbed this ointment around the diseased part, as often as I was able from the state of the pustular surface. His bowels, previous to this, were always rather costive, and occasional doses of laxative medicine were required to produce regular evacuations; after the first rubbing their action was considerably increased, as he had daily two stools, at least, without the use of any opening medicine.

In the first case, the action of the medicine was very severe, keeping up a continual diarrhoea; in the other, however, its effects were more moderate, but sufficient to show distinctly its operation on the alimentary canal. During the external use of this medicine, neither sickness, nausea, nor any other of the effects produced by its internal administration, were observable: I have repeatedly rubbed it on other parts of the body, such as the nape of the neck, breast, &c. without observing any effect produced on the abdominal viscera.

IV.

Cases of Rupture of the Liver. Communicated by a Friend of the Editors.

A GENTLEMAN, aged fifty-five years, who had been in the habit of drinking freely during the last thirty years of his life, particularly of ardent spirits, on the 4th of March, 1822, fell, while in a state of intoxication, when his right side struck a hard and projecting substance. As no bruise nor ecchymosis was observed in the part on which he thus fell, but little

notice was taken of the occurrence, until about four days afterwards, when he began to complain of pain in his side, which was attended with some difficulty of breathing. His medical attendant thought that he had suffered a relapse of hydrothorax, under which he had been considered to have laboured about six years previous to his present accident, by a Physician of some eminence, under whose care he then was.

The remedies usually employed for hydrothorax were resorted to on this occasion, but without any appearance of amendment. He constantly complained of soreness in the right side, under the true ribs, which was so great that he could not bear the waistband of his breeches to be buttoned. Although no improvement took place, yet the medical gentleman in attendance did not apprehend any very immediate danger until the day on which the patient died, and which was the eleventh from the time of the accident. Nor was it supposed, at the time of his death, that the fall was its cause, but that he had died of hydrothorax. A gentleman who was consulted having entertained a different opinion, permission was obtained to open the body, when the following appearances were observed : —

On opening the abdomen, the peritoneal covering on the right side was found inflamed. The omentum was tuberculated, and at least three-fourths of an inch in thickness. On removing this viscus, about four pints of a pus-like fluid was effused in both hypochondria, but chiefly in the right. The right lobe of the liver was nearly divided into two parts, which were held together on the lower or posterior part by about a fourth of an inch of its own substance. The divided surfaces were covered with a coat of perfectly transparent lymph. The left lobe was of a clay colour, as was the right. The other abdominal viscera were healthy. On dissecting, in order to get into the cavity of the thorax, the cartilages of the ribs were found perfectly ossified, so that a saw was used to divide them. There was no fluid either in the left cavity of the thorax or in the pericardium. The heart and lungs were natural. The right cavity of the thorax contained about a pint of serum ; and on the pleura covering the lower ribs a deposit of recently formed lymph was noticed, evidently the result of the blow received in the fall, and corresponding to the inflamed peritoneum of the same side. There were no adhesions in either cavity.

Might not the complaint, for which this gentleman was treated, about six years previously, have been the ossification of the cartilages of the ribs ; which ossification, during its progress and completion, occasioned at first that derangement

of the function of respiration, which led to the belief in the existence of hydrothorax, and which was removed in consequence of the muscles concerned in respiration having become accustomed to the change? And might not the same circumstance, viz. this ossification, conjointly with the small effusion into the right thoracic cavity, have occasioned the symptoms which led the medical attendant to conceive that hydrothorax existed after the patient had met with the accident?

A very respectable and experienced Practitioner informed the gentleman who favoured us with the above case, that about nine years ago he met with one entirely similar to it, as far as it related to the rupture of the liver. A farmer's wife fell from her market-cart, when her right side struck the step of the cart. The symptoms of which she afterwards complained were very indistinct, and did not indicate that any important organ had suffered materially. She survived the accident exactly as long as the gentleman did, whose case has been just related, and sunk as unexpectedly. On dissection, it was found that a rupture of the liver had taken place, very similar in extent and situation to that described above.

V.

Case of Chronic Diarrhœa successfully treated by the Use of Secale Cornutum. Communicated by ABRAHAM STOUT, M.D. of Bethlehem, Pennsylvania.

S. L. a single woman, aged twenty-eight years, was from her childhood very weakly, and subject to nervous affections. About eight years ago, she was first afflicted with a diarrhœa, which continued, without much alteration, for upwards of six years. She became much emaciated, her legs were often œdematous, and occasionally a tumefaction of the abdomen, attended with a distinct fluctuation, was observed. Her mind became so much disordered that it was often with difficulty her mother could get her to converse, and the sight of a stranger excited fear to an extreme degree. She had no appearance of the menses before she was in her twenty-fourth year. The discharge was then natural, but it came on at irregular periods, and did not appear to have the slightest effect on the diarrhœa or mental disorder. In this deplorable condition she was, in the summer of 1821, when I first saw her. Previously to this time, she had been attended by several country Practitioners. I put her on a course of tonics and astringents. By pursuing this treatment for a

considerable length of time, she gained more strength, though the various vegetable and mineral astringents, which I at different times employed, together with opium, had little or no effect in restraining the diarrhœa. They checked the disease sometimes for a day or two, but, notwithstanding the continuation of the treatment, the complaint would return with an apparent increased violence. The flores martialis were given at one time, with a view of checking the diarrhœa, on the authority of Dr. George Green. The effect which this article produced for the first eight or ten days was so striking, that little doubt remained in my mind of its effecting a cure: but after the patient became habituated to the medicine, the disease resumed its usual course, though the dose was increased to as much as the stomach would bear. In the early part of last summer, the patient had a suppression of the menses, which occasioned hysteria, headache, and vertigo. After using several emmenagogues without success, I was induced to give the secale cornutum a trial, and commenced with the dose of six grains, three times a day. The medicine produced an uneasiness in the uterine region, without restoring the menstrual discharge: on the diarrhœa, however, it had a very salutary effect. By continuing this article a few days, her bowels became so much constipated, that it was necessary to omit it, and resort to laxatives. I directed her to take one or more of the powders of the secale cornutum, only when the complaint made its appearance. She followed my advice, and it had the effect, not only of checking, but of curing this very obstinate case of chronic diarrhœa. The menstrual discharge was restored, by the use of the tincture of cantharides. Her health afterwards improved rapidly, her mind became cheerful and happy, and, during the course of last winter, she paid many visits to her friends and relatives.

As far as my observations have extended, with respect to the *modus operandi* of the secale cornutum, in curing the above-mentioned disease, I have reason to believe, that it did not produce this effect by any astringent quality which this article may possess, nor from a direct action on the bowels. It probably made an impression on the stomach, which by sympathy excited a new action in the uterus, that counteracted the morbid one in the intestines.*

* Philadelphia Journal for May, 1823.

VI.

A Case of Puerperal Convulsions successfully treated with the Ergot. Communicated in a Letter to WILLIAM DARRACH, M.D. by W. D. BRINCKLE, M.D.

Mrs. R. aged thirty-five, was taken in labour with her first child, about sunset on the 18th of May, 1821. Her pains were good, and a very flattering time was anticipated—when suddenly, and without any premonition, she was attacked with convulsions. The midwife who officiated sent immediately for me, and on my arrival, which was at ten o'clock, P. M. gave me the preceding information. Since her recovery, however, Mrs. R. has told me, that previously to the occurrence of the convulsions she had a very severe pain in the fore part of her head. At the commencement of each fit, the arms and wrists became cold, although the hands continued warm: the appearance of the convulsed countenance was horrid— with a pulsé hardly perceptible and frequent. When the froth began to issue from her mouth, and the stertorous breathing, which was truly alarming, had come on, the arms and wrists resumed their natural temperature, a moisture made its appearance on the surface, the pulse rose, and beat violently. These paroxysms succeeded one another with very considerable regularity. The lancet, in this case, was freely employed. I drew blood copiously at three different times, and I would, unquestionably, have continued the depletion, had the pulse permitted it. In addition to venesection, I had recourse to camphor, aperient injections, sinapisms, and blisters. I am sorry, however, to say, that this course produced very little effect either as to the frequency of the paroxysms, or the efficiency of the pains. Her pulse was now evidently too much reduced to bear any further depletion. Conceiving that the ergot might be employed to advantage, although I had not heard of its having been used in a similar case, I gave, at ten o'clock next morning, ten grains of it, which was repeated in half an hour. In twenty minutes after the first dose was given, both the force and efficiency of the uterine action were increased, and at half-past eleven the child was born. She had no convulsions after the ergot was administered. Although the advantage derived from the *secale cornutum*, in this case, was so decided, I do not know that I should resort to it in puerperal convulsions, until the lancet had been actively employed. If there exist much action, I have always found the ergot to operate more promptly and powerfully when preceded by

venesection. Nor do I think it would be altogether proper to prescribe it until labour is pretty considerably advanced, and the os uteri dilated. Where convulsions supervene, in a case of commencing parturition, we should endeavour to suspend the action of the uterus, by boldly using the lancet as far as may be expedient, and then resorting to opium and camphor. This plan succeeded in a case which occurred four days after that which has just now been related. The pains were completely arrested, and, with them, the convulsions. In a week afterwards labour recommenced, and my patient was delivered without the recurrence of the convulsions, or the accession of any untoward circumstance.*

PART II.

ANALYTICAL REVIEW.

Elements of the Theory and Practice of Physic. By GEORGE GREGORY, M.D. Licentiate of the Royal College of Physicians in London, and Senior Physician to the St. George's and St. James's Dispensary. Vol. II. London, 1823.

THE learned and sententious Zacharias Silvius, of Rotterdam, in his preface to a work of some repute on the art of preserving health, published in the sixteenth century, and entitled, "*Schola Salernitana*," has made no small waste of the precious oil of the lamp—not in praises of the art—but of that which it professes to preserve. But this is not all—the same Zacharias has there bestowed some notice upon the early Professors of this art, of which, peradventure, he conceived himself no unworthy member. Speaking of it, in the time of the Asclepiades, when those fields from which the moderns have gathered so many harvests were fallow land and waste, he utters a brief and sharp sarcasm against them in these words, "*Tum temporis medicorum penuria*." Nor is this all—in the next sentence he proceeds to tell us, in Latin, assuredly none of the purest, that when the art was communicated, and men sought to stimulate their appetites rather than to gratify them, it was then that the luxuries and

* Philadelphia Journal for May, 1823.

refinements of the table begat a strong necessity for leechcraft, and gave rise to the multitude of its professors — *hunc multiplicem medicorum numerum* of which he complains.

If Zacharias were now among us — *totus teres atque rotundus* — if the grey quill were now between his fingers — if, moreover, he had to write a preface in our time, nay, we will suppose a preface to this very critique, what would he now say of the rising generation of the Philistines, as we have been called? Would he not quote Ovidius Naso — as he is previously addicted to quoting — and compare us, so quick in growth, so formidable, and so many in number, to the dragon's teeth, which were no sooner sown than they sprung up into armed men? But — for we will speak only of men's works — if he were to cast his eyes about him on the immense piles of medical writings that have accumulated of late years, and which must, like poor Zacharias, be soon gathered to the dust of their forefathers, what would he then say? Would the real motives which led to the existence of many of them be quite apparent to him? Would he not rather laud our ingenuity and industry, our patience and philanthropy, in collecting so large a mass of information for the as yet unlearned in this most marvellous art of healing? Would he not do some honour to our zeal, that the lives of our fellow beings should be carefully intrusted to skilful hands, and heads, though not grey, yet full of the wisdom of years? Would he not share — deeply share — in our anxiety to shake off the obloquy that Pliny cast upon us in the olden time, and whose truth he has with prepossessing frankness acknowledged? Assuredly he would; and we should take no small pride to ourselves in committing to his hands some works that might redeem us, at least, from a part of this reproach. It should go hard with us but we would lay before him works of our own country, in the various departments of medical science, that should awake him for ever from his intellectual slumbers — works of unpretending merit — works of deep erudition, of a pure philosophic spirit, but what is better than all, of high practical importance. In this our own day, what works could we deposit at his feet, and what names to consecrate them? — Jackson, Blane, Barclay, Cook, Prichard, Pring, Good, Abernethy, Cooper, Armstrong, Johnson, Baron, and others — many others; nor should we fear to fling down the work with which we are now concerned. Then, in truth, we might forgive his enthusiasm; and when he read these names, he might indeed exclaim, without show of affectation, *Ἀνδρώποι ἀνδρώπων δαιμόνια!*

It is indeed marvellous to consider what materials we have for the propagation of medical science and the salvation of

the species — materials most, or at least very many of them, spread abroad in pamphlets, particular treatises and journals, like orient pearls at random strung, and needing only the labours of some “fine Roman hand” to gather and collect them together. These scattered and solitary lights that burn dimly by themselves, and throw a diminished lustre over the detached and miscellaneous pages of medical literature, may be thus made to derive additional strength and brilliance from concentration, as the hues that are broken in the prism, combined together, make all the glory of the rising or the setting sun. The object, to which we advert, has been accordingly attempted by a few pathological writers, but in no wise with that success which we presage will, in the fulness of time, crown their ulterior efforts. We have works both compiled and eclectic, and these are precisely the works wherein we may be emboldened to seek that information *en masse* which is conveyed in so many minor and subordinate vehicles, and to which we may look as to a graduated scale for the progress of our advancement in medical science. But what works of reference have we of the kind alluded to? First, we have Cullen’s Practice of Physic, Cullen Primus we should say; but strange rumours have gone abroad that his doctrines are false, and his principles unsound — this, however, all are not bound to believe; — then we have a large and a small book, daily resorted to like the oracles of yore, we mean Thomas’s and Hooper’s Practice of Physic, by some, with unbecoming irony, called Cullen Secundus and Cullen Junior, and by others declared to bear a strong family likeness to the elder-born, and above all to bear, with very few of the redeeming qualities of their ancestor, all his faults and imperfections on their heads — this, even, all are not bound to believe: — we have also Dr. Good’s laborious and gigantic work, the “Magnum Opus,” of so many sleepless nights and toilsome days; but his volumes, we have heard it said, to speak it not profanely, would have been more acceptable to the moderns if there had been less of the ancients therein, — this, too, all are not bound to believe. Lastly, we may add, Dr. Gregory’s Practice of Physic, and we pronounce it, upon the whole, an useful addition to this particular class of works. It is the simple and unambitious offering of a young Physician to the junior members of the Profession, to whom it is chiefly adapted.

Most medical men have a strong predilection for one particular work, which acquires a certain degree of sanctity and excellence with them by frequent reading, and to this the mind secretly and unconsciously reverts in the “soft unbended intervals of ease,” and when occasion calls. This

predilection was strongly characteristic of the ancients, and we have a Latin proverb that has come down to us from them, with a number of others in less repute — “Cave ab homine unius libri.” It is in truth a very good proverb; for the perusal of one work of standard merit and usefulness is worth the desultory reading of many, and alone it might make the student not only master of his subject, but, as the proverb imports, a formidable opponent too. Now, we should not hesitate to recommend our young readers to an intimate acquaintance with our author, for in him they will find instruction conveyed in obvious and easy terms, and delivered with earnestness, ingenuousness, and caution. It is not, we confess, a profound work or one of research, and perhaps, for this reason, we may promise it a longer reading; yet we take shame to ourselves that it should be so. It is needless to remind the reading part of the medical public that the largest pearls are to be found in the deepest waters; for, alas! the dust hangs thickest upon those writings which the learned few admire the most, as if in pure mockery of their lore and science. But we must show what our author is before we make further comment on his talents as an author; albeit, after what we have said, further comment would be idle. It may be already known what we think of him—*cela va sans dire*.

The first part of this elementary work has been some time before the public, and has passed muster in the reviews;* we shall, therefore, confine ourselves to the second volume, of which we think more highly than of its predecessor in regard to style, composition, and subject matter. It is devoted to the consideration of chronic diseases, (the acute are discussed in the first part,) which are divided into five classes.

Class 1. Chronic diseases of the encephalon; 2. of the thorax; 3. of the chylopoëtic viscera; 4. of the urinary and uterine systems; 5. chronic constitutional diseases. We shall select two chapters from these, and shall begin at the beginning, as we prefer the first chapter in this class to the others, containing particular accounts of diseases of the brain, having analysed most of them in the preceding Numbers. Dr. Gregory refers the symptoms that mark their character to disordered states of the functions of the nerves and brain; the chief of which are sensation, voluntary motion, and manifestation of mind; and designates these states as coma, convulsions, and mental aberration. 1. Coma, he tells us, consists in the loss of sensation, thought, and voluntary motion; in it the organs of involuntary motion preserve their functions; and as the pulse still

* See the review of the first volume, in the MEDICAL REPOSITORY, Vol. XIV. p. 303.

continues to beat, and the lungs to breathe, it must not be confounded with syncope and asphyxia. We cannot, however, make the like distinction between coma and two states of the body perfectly compatible with health, namely, that of sleep and intoxication. In the former case we cannot rouse our patient from what may be almost called the "sleep of death" by shaking, noise, or otherwise; whereas, in the latter, our own organs, and some little information to be obtained from bystanders, will be sufficient to show that the invisible spirit of wine has been busy in the brain. We say nothing of the other signs that Pliny has enumerated, viz. the *pallor et genæ pendulae, oculorum ulcera, tremula manus, furiales sonni, inquietas nocturna*. Perfect coma is attended, as in apoplexy, with abolition of sense and voluntary motion; but it is more or less partial in other disorders of the above functions, and is variously modified in the different states of preternatural drowsiness or lethargy, paralysis of particular muscles, indistinctness of vision, amaurosis. 2. Speaking of convulsions, he objects to the common definition that recognizes only the excitement of the *voluntary* muscles into action. It must be allowed, indeed, that sometimes the involuntary muscles are alike affected as the respiratory muscles, for instance, in asthma, or the muscular coat of the stomach or intestines in colic. Besides the two kinds of spasm, the tonic and clonic, which evidently depend on the states of the nervous system and of muscular irritability, he mentions a variety of partial convulsions symptomatic of diseased brain, as permanent contraction of the iris, irregular contractions of the muscles of the eye, vulgarly called squinting, and the convulsions of the pterygoid muscles constituting "grinding of the teeth."

3. Mental aberration is temporary or permanent, occurring either in the form of delirium or mania; and general or partial, the whole state of the mind being deteriorated to the utter extinction of the powers of thought, as in idiocy, or one or more faculties being disordered while others are undisturbed, or more or less perfect. Sometimes the imagination is alienated, as in cases of mania, while the memory is uninjured; and sometimes the memory fails, while the brain preserves the powers of perception entire, of which we have examples in injuries of the head and paralytic seizures. There are different degrees and kinds of mental aberration, depending, we may remark, upon the causes that give rise to it, on previous habits, and above all, on the peculiarities of temperament. Sometimes it is attended with a fierce, intractable, and turbulent spirit, breaking out into paroxysms of ungovernable rage, strong enmities, and high constitutional excitement. At other times it is accompanied

with a deep and concentrated feeling of melancholy, and a settled, sullen gloom of spirits. To modifications of this state of mind the term *hypochondriasis* has been applied.

After having discussed the nature of nervous diseases, the author proceeds to inquire into those derangements of the circulating system which involve their proximate cause: and we give his own words:—

“ 1. The first of these is chronic inflammation of the substance of the brain or its meninges. That this is the true proximate cause of many cases of chronic disease within the encephalon, is abundantly proved by the appearances found on dissection, which are depositions of coagulable lymph upon the surface of the brain, thickening of one or more of the membranes, and suppuration. These unquestionable marks of inflammatory action are, however, but rarely met with in comparison with two others frequently adduced as evidences of the same state of disease; I mean, increased vascularity within the cranium, and serous effusion between the membranes, or within the ventricles. These appearances are very common in different diseases, but in none are they so generally met with as in chronic affections of the nervous system. There are few instances indeed of any morbid change of structure in the brain existing without them. Pathologists have differed however in their estimate of the importance to be attached to them, especially that of serous effusion. The general opinion appears to be, that though it cannot be assumed as a proof of the existence of actual inflammation within the brain, it must yet be allowed to denote a degree of morbid excitement of the vessels of the brain not far removed from inflammatory action.

“ 2. The second of the morbid conditions of the circulating system, connected with nervous disease, is simple congestion of blood in the blood vessels. This may arise either from an extraordinary flow of blood into the arteries of the brain, or from the difficulty experienced in the return of blood to the heart. The peculiar structure of the large venous trunks of the brain is calculated to lead, under certain circumstances, to stagnation, or, as it is now more commonly called, venous congestion in the head. That such a state of the circulating system in the encephalon does occasionally exist, there cannot, I presume, be a doubt; but it may be fairly questioned how far we are able to judge of its existence, with any degree of accuracy, by examination made after death. It is, at least, sufficiently ascertained that that fulness in the brain, so often found upon dissection, and supposed to denote congestion, depends in a great degree on the position in which the body had lain previous to examination.

“ 3. The third of those states of disease, to which our attention must be paid in this inquiry, is hemorrhage. The rupture of a blood-vessel within the brain acknowledges many of the laws which affect other hemorrhagies; but the want of outlet for the effused fluid, the peculiar delicacy of the structure of the brain, the importance of its functions, and above all, the remarkable effects of pressure upon its substance, give to the hæmorrhagia cerebri an interest far superior to

what belongs to any other form of hæmorrhagic disease. The symptoms produced by effusion of blood within the brain are, with few exceptions, those of apoplexy, and the nature and varieties of cerebral hemorrhage will accordingly constitute the most important feature in the pathology of that disease.

"4. The fourth morbid condition of the circulating system, observed in certain diseases of the nervous kind, is an *imperfect supply* of blood. The brain, like every other organ of the body, is dependent for the due exercise of its functions on the circulation. It can neither perform them properly when the supply of blood is either too great nor when it is too defective. Syncope is the usual result of a want of due supply of blood to the brain; but convulsions occasionally arise from the same cause, as is well exemplified in the instance of puerperal hemorrhage. It is not often that we have to apply this principle in the pathology of nervous diseases, but in a general view of the subject, such as we are now taking, it would have been improper to omit it.

"5. In like manner it becomes necessary to notice a fifth state of the circulating system which is occasionally present in nervous diseases; I mean the supply of blood imperfectly oxygenated, and therefore unfit for supporting the functions of the nervous system. This principle, it is true, like the last, is very limited in its application; but it enters into the pathology of apoplexy, and is the foundation of many of our reasonings concerning asphyxia."

There are, however, two distinct morbid conditions of the brain not depending, as we have good reason to believe, upon any primary change in the vascular system. The one is concussion of the brain, and simple compression produced by a coagulum of blood, a soft tumour, bony excrescence, depressed portion of the cranium, or some extraneous body; the other is a specific affection of the brain and nervous system, altogether independent of the causes above mentioned, and curiously, but strongly illustrated in the phenomena of narcotic poisons, which act directly on the sentient extremities of the nerves, occasioning coma and convulsions, and depriving the nervous substance of its mobility, or of its power of receiving or communicating impressions. The former gives rise to symptoms of a comatose or apoplectic character, and has been known to be followed by high nervous excitement, mania, and convulsions. The latter, it is supposed, may account satisfactorily for the absence of those evidences of morbid derangement we expect to find post mortem in cases of long-standing disease of the brain.

The researches of morbid anatomy do indeed often perplex us in the extreme, and too often show the hollowness and vanity of our pretensions to perfection in pathological knowledge. When we look into the recesses of those organs which we have assumed to be the seat of derangements that

belong to other systems, we cannot abstain from certain reflections, not so much upon the imperfection of the art, as the swelling and vainglorious spirit of those that profess themselves to be perfect in it. The fallacy of judgment which we now deplore, and which is unavowedly too often chargeable upon us, has more frequently alliance with chronic than acute diseases. In them we often find the *fons et origo mali* where we least expected, after having pursued disease in the living subject, after having tracked it through its various involutions, combinations, and movements from one organ to another, and referred it to some part or system of parts, discovered in the issue, as the French Physicians say, *intact*. Dr. Pring, in his excellent chapter on Determinations of Blood—which we have perused and re-perused with increasing satisfaction—has observed, that the proofs of a determination of blood (and on this cause most of the diseases of the encephalon depend) to parts during life, which are obtained by their inspection after death, are sometimes wanting, must be admitted by all who are familiar with such examination. Amongst other cases in which this fact is exemplified, he has related one of a boy who laboured under tetanus, in consequence of a wound, involving the pes anserinus of the face. No morbid appearances were observable either in the nerve or in the brain, whose vessels, Dr. P. remarks, were not more turgid than they may be found in subjects who die of old age, or diseases the most distantly connected with the brain. We were present a few weeks ago at the inspection of the body of a boy who died also of tetanus, produced by a simple contusion; but no signs of lesion were to be perceived in any of the viscera, though one or two gentlemen present thought that the membranes, surrounding the medulla spinalis, were more vascular in some parts than they should be. We may infer, therefore, with this eminent pathologist, that determination of blood is not an universal accompaniment of disease; and if this conclusion be established in certain cases, it will also appear that he who, upon a mistaken principle, makes large and frequent abstractions of blood in all instances of disordered brain, will not only often fail of giving relief to his patient, but will aggravate the disease. The student of medicine may here, in Dr. Gregory's own words, receive an important lesson. He may learn from this that the causes of death are often as obscure as the sources of life and health; and that morbid anatomy, with all its acknowledged advantages, may, if pursued too exclusively, injure rather than forward the conclusions of the pathologist. After having noticed the paradoxical analogies that occur between the chronic diseases of the encephalon,

and which are stated with admirable precision and perspicuity in Dr. Prichard's work, in that part entitled "*Intimate Connexion of Nervous Diseases*," he insists upon the efficacy of the depleting and lowering system — adapted necessarily to the particular circumstances of each patient, and the peculiarities of each disease. "This is the great principle kept in view," he well remarks, "whether we employ bleeding, purging, leeches, cupping, local cold, blisters, issues and setons, or content ourselves with remedial means of a less formal, though not less useful character, such as a cooling spare diet, regular exercise, or a course of aperient mineral waters. By these means, early, steadily, and judiciously applied, we may often do a great deal towards the relief or permanent cure of the chronic diseases of the brain; while without them, and depending upon stimulants and antispasmodics, our expectations will be but too often baffled."

Dr. Gregory, in this class, has omitted — and we are sorry to find him guilty, throughout the work, of too many omissions, both pathological and therapeutical — to mention nervous disorders of the head, and certain severe affections of the head which are found sometimes to substitute disease of the skin or scalp, and which are noticed by Dr. Pring in his profound work on Pathology. The most common symptoms of nervous disorder of the head, he tells us, are pain, throbbing, sense of tightness across the forehead, rather white but moist tongue, and the pulse, during an exacerbation, between ninety and a hundred, at other times, perhaps, between seventy or eighty. We have often been inclined ourselves to refer the pain, with Dr. P., to the scalp, for the reasons he has assigned, namely, the tenderness of the part, and the relief obtained from pressure by a handkerchief, whereby the blood is intercepted from flowing to the scalp. There not unfrequently exists a tendency to cutaneous diseases in alliance with these disorders, particularly to boils; and Dr. P. thinks the form of cutaneous disease is most frequently that of erysipelas. The best mode of treatment seems to be occasional local bleedings and purgatives, alternating with a slight mercurial course of blue pill, and a regimen by degrees increased to repletion.

We have alluded to severe cephalic affections, substituting a diseased state of skin or of the scalp. In two cases of this kind, Dr. Pring tried every sort of treatment in vain: bleedings from the arm, from the temporal artery, by cupping, by leeches; blisters on the back of the neck, between the shoulders, on the scalp behind the ears; cold lotions; hot fomentations; setons; pustular eruptions produced on the scalp by emetic tartar ointments; the extraction of suspected teeth;

nauseating and emetic medicines; a long course of purgatives; tonic remedies, as steel, bark, arsenic, ammonia, asafoetida, opium, &c.; vegetable diet, and starvation; animal diet, with ale and porter. In one case, the disease terminated by metastasis to the liver; the other has continued with but trifling mitigation more than ten years.

We shall next select a chapter from the next class; and perhaps one of the best is that upon chronic affections of the heart, though he has given but an imperfect account of the diseases affecting its cavities, valves, and great vessels, considering the abundant resources that have been furnished by pathologists on these important subjects. We do not conceive an inquiry into the several kinds of structural disease of the heart and vessels to be one merely of curiosity, or, in the author's words, one of curiosity more than of practical interest. A work of this sort is in some measure bound to present us with as full and comprehensive history of disease as its limits allow; but assuredly its limits, in the space afforded by two volumes of more than ordinary calibre, are not so narrow as to justify undue curtailment of its fair proportions.

1. "The simplest, and one of its most frequent structural derangements," he states, "is dilatation, either general or partial, of its cavities. It sometimes takes place without any increase of substance in the heart; at other times, the heart is enlarged by an addition of solid substance, cellular and muscular; its cavities remaining very little, if at all more capacious than usual." In the latter case, the auricles are rarely affected, but one or both ventricles may be diseased. Simple dilatation of its cavities is attended with a sense of oppression about the chest, a full, slow, soft, or sometimes even an *imperceptible* pulse. Three distinct varieties of this form of disease are recognized in Laennec's excellent work—a work which Dr. Gregory has entirely, and most unaccountably neglected to mention—namely, active aneurism of the heart, without dilatation of its cavities (*hypertrophia simplex*); 2d, dilatation of the ventricles of the heart, by Corvisart called passive aneurism; and, 3d, dilatation of the ventricles, with thickening of their parietes (by him also called active aneurism). We refer our readers to Laennec's work for the symptoms, and to our review of that work.*

2. In cases of active aneurism, or where the heart has undergone a thickening and augmentation of its muscular structure, we are informed that the symptoms resemble those attending chronic inflammation of the pericardium. There

is a constant sense of struggling in the thorax; with inexpressible anxiety referred to the heart. The pulse is quick, hard, and jarring; and when the hand is applied to the chest, the motion communicated to it resembles a thrilling. When there is dilatation of the right ventricle, together with increase of substance, there is increase of dyspnœa, hæmoptysis, a purplish hue of countenance, and coldness and discoloration of the extremities. Laennec tells us, in this case, the stethoscope, of which Dr. G. makes no mention, on being applied to the chest, conveys a clear and distinct sound. In active aneurism, we generally find a diseased state of the valves, which offers a mechanical impediment to the circulation of the blood, and necessarily produces an increased, nay violent action in the heart.

3. The author takes a short and cursory view of diseases of the valves, and remarks:—

“ Much importance has always been attached by pathologists to the changes of structure which the valves of the heart and large arteries so frequently undergo, and to the symptoms thereby occasioned. That in many cases diseased valves are the direct cause of various marks of obstructed circulation there can be no doubt; but, it is not to be forgotten that they are often found where no symptoms had led to the suspicion of them. It is, I believe, quite impossible to ascertain, with any degree of precision, during life, the existence of diseased valves, as separate from every other variety of disorganization of the heart. Still more hopeless is any attempt to determine what valve or set of valves are affected. The general symptoms of obstructed circulation by which we are led to form a plausible conjecture as to the existence of ossified valves are, according to Dr. Baillie, frequent palpitations, a difficulty of breathing, a weak and often irregular pulse, and in some cases a disposition to fainting. To these symptoms, other authors have added, and I believe justly, hemorrhage from the lungs and dropsy.”

The deposition of calcareous matter in the very citadel of life is perhaps one of the most extraordinary specimens of disease that affect the human frame, and warn us, as it were, of the slow and progressive resolution of its materials into those of “dust whereto ’tis kin.” We do not, however, consider it as entirely the concomitant of a prolonged state of existence, nor even its effect, as it has been known occasionally to occur in young subjects, and rarely in brutes, (as Hodgson has remarked, in his work on “Diseases of the Arteries and Veins,”) many of whom, as the elephant, eagle, &c. live to a very advanced period. In the coats of the arteries it is frequently productive, as he has accurately described it, of the most serious effects, either by destroying the continuity of that portion of the vessel in which the depo-

sition takes place, or by impeding the current of blood that is destined to pass through the artery for the supply of other parts. It is therefore the frequent cause of aneurisms and passive hemorrhagies. Indeed, in many cases of apoplexy in persons of advanced age, we find ossification and other disorganized states of the vessels of the brain.

Ossification of the aortal valves is often found to be the cause of those diseases of the heart of which mention has been made — in consequence of the violent action to which this organ is subjected by its frequent attempts to rid itself of the volume of fluid that stimulates its cavities, and which can only flow through its constricted orifice. We have so good an account of the symptoms produced by a morbid condition of aortal valves in this same treatise, that we shall hazard no apology for making a few hasty extracts from it. They consist in the violent action of the heart, and the feeble and contracted state of the pulse. The former arises from increase of substance in the muscular structure of the ventricle, and, consequently, increased force in its contraction. The latter is produced by the diminished quantity of blood that is thrown at one contraction into the arteries. But it is necessary to combine the knowledge of symptoms of some other diseases, superadded to those already mentioned, before we can attain to a diagnosis sufficiently satisfactory. Contraction of the left auriculo-ventricular opening he has, in several instances, observed to be attended with a double pulse at the heart; whereas, in simple obstruction of the orifice of the aorta, this symptom is altogether absent. He accounts for the double pulse in the following way: — There is one pulse produced by the action of the auricle, which is increased in thickness, and consequently in force; by this the blood is propelled towards the ventricle, but the opening being smaller than it is in a healthy state, it is not poured at once into that cavity. The auricular pulse resembles an irregular thrill or *bruissement*, as Corvisart terms it, rather than distinct pulsation. There is also another pulse produced by the action of the ventricle, which, though incompletely filled, forces the blood into the aorta. “The sensations which are produced by the deposition of calcareous matter in the valves of the aorta, attend most other organic diseases of the heart and great blood-vessels. The patient complains of palpitation and irregularity in the action of the heart, producing occasional syncope. There is an intense pain at the scrobiculus cordis and underneath the sternum, generally extending down the arms, and terminating in a sensation of numbness. The great cavities and the extremities become dropsical, the respiration

is laborious, and there is often a violent pulsation in the epigastrium."*

The treatment of such disease can only be mitigative. We must endeavour to diminish the constant irritation under which the heart labours, by lessening the quantity of blood, and preventing it from being increased. This indication is best fulfilled by moderate but repeated depletion and abstinence, to which must be added, the removal of such causes, either physical or moral, as affect the heart.

4. Aneurism of the thoracic aorta, Dr. Gregory proceeds to inform us, is a frequent and most distressing state of disease. It is generally attended with more or less of pain in the aneurismal tumour shooting to the arm of the same side, and in proportion to the advances of the disease, the breathing becomes disturbed. If this be intended for a pathological draught of the disease, it is indeed but imperfectly executed, and we fear few of our students would be enabled thereby to trace out the original. In our *friend* Dr. Reeder's Practical Treatise, we have a long and elaborate delineation of symptoms, occupying four ample pages. There truly we have a picture — large as life — of the disease; and, indeed, to speak of it, not as a picture, but as, what it is, a work, we must say that he does not like Pistol's maxim *pocos palabras*, but has eked out his solid pages to French wire. Dr. G. proposes, by way of treating this affection, repeated leeches to the chest, and the application of cold to the tumour, when it makes its appearance externally. He speaks favourably of digitalis, and recommends a strict attention to diet and regimen.

5. He concludes this chapter with an account of congenital malformation of the heart and large blood-vessels, which are of various kinds, and which have been ably described by Dr. Farre: —

"They all agree in one result — the intermixture of venous with arterial blood throughout the body. It is certainly a curious fact that life should be compatible with such a state of the circulating system; yet it is so; and persons have been known to live for many years with it, and even ultimately to die of a disease unconnected with such a deviation from ordinary structure. The great source of mischief and danger, as Dr. Farre has pointed out, is not the mere mingling of black and red blood, but the *difficulty* with which the circulation is generally carried on by a malformed heart. This is connected, in many cases, with the comparatively small size of the pulmonary artery, the consequence of which is, that the *full* propor-

* Hodgson on Diseases of the Arteries and Veins.

tion of blood is not circulated through the lungs. The principal symptom of malformed heart is a permanent blue colour of the skin, from which circumstance the term *blue disease* has commonly been applied to these cases. The other symptoms to which it gives rise are, general weakness of the whole frame, permanent or spasmodic dyspnoea, palpitation, an irregular, weak, or intermittent pulse, and in some cases coldness of the skin and emaciation. Persons who have malformed hearts are liable to hemorrhagies, dropsical effusions, attacks of syncope or epilepsy, and occasionally to the unequivocal symptoms of oppressed brain."

We cannot afford room for further extracts, and we have already, we trust, given enough of this work to show what it is. We shall, therefore, be permitted to draw our review of it to a close, and say a few words to the author at parting.

We regard his performance more as an earnest and pledge of something better, than as possessing that degree of excellence which we should be satisfied with; and, therefore, we would animate and exhort him to the prosecution and completion of his task. He will find, and no doubt he has found, that the wide field on which he toils abounds in produce, and may be made to answer the expectations of those who labour at its cultivation and improvement. It is, in truth, a rich and practicable soil—the land has been well ploughed—the seed already sown, and its growth rapid and luxuriant. We have only to reap the harvest—to collect the grain, and deposit it in that vast granary where so many stores are already garnered—whence we may select at leisure, and appropriate them in time of need to the purposes of life and health. We have said that we consider this work only as a pledge. We would, therefore, remind our author that he has acquired some degree of reputation by beginning as he has; but he has still much more to do before he reaches that perfection which all medical authors should aspire to. We would also remind him, and it is encouraging so to speak, that the reputation of the Physician is not only productive of an honourable emolument, but of the dignity and high consideration which confirms its stability. "The feather," Junius has emphatically remarked, in one of the finest metaphors of our language, "the feather that adorns the royal bird, supports its flight. Strip him of its plumage, and you fix him to the earth." And what is reputation to us but the plumage to the bird? We rise and fall with it. With it we are enabled to aspire to that "pride of place" which the royal bird, it is said, can only reach—to the highest honours of our Profession; and without it, we sink grovelling to the earth, and are scarcely numbered among living men. We would, lastly, remind our author, that his responsibility is

marked upon the scale of his advancement; and that although, according to the French proverb, the chief difficulty lies in the first step, it is still difficult to retain one's footing on a place even of moderate elevation.*

PART III.†

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

De l'Oblitération des Veines, et de son Influence sur la Formation des Hydropisies Partielles: Considérations sur les Hydropisies Passives en général. Par M. BOUILLAUD, Interne des Hôpitaux Civils de Paris.‡

IN a late Number of this Journal || we gave a short extract from a communication, by M. Bouillaud, contained in the January Number of the Journal de Physiologie, in which he stated that he had observed, in several cases of infiltration or œdema of the lower extremities, that the venous trunks, after entering the pelvis, were quite impermeable, and filled by a concrete and organized coagulum. The communication before us is a more extended inquiry into the same subject, and consists of an attempt to confirm, by facts and observations, that *passive* dropsies, or those which are not occasioned by acute or chronic inflammation of the serous membranes, are all produced by the influence of some obstacle to the venous circulation; and that, in a considerable number of cases, such obstacle consists in an obliteration of the venous system of the part which is the seat of the dropsical affection. By this explanation, the author, of course, denies that they are occa-

* It would be well for the great men, or even for the moderately great men of our Profession, to bear in mind the well-known lines of Horace:—

“ Sæpius ventis agitur pinus
Ingens, et celsæ graviore casu
Decidunt turres, feriuntque summos
Fulmina montes.”

† The length to which our “Historical Sketch” has unexpectedly extended, obliges us to defer the concluding part of the review of Dr. Pring's work on Pathology until our next Number.

‡ Archives Générales de Médecine, Juin, 1823.

|| REPOSITORY, Vol. XIX. p. 435.

sioned by a debility either of the general system or of the lymphatic vessels.

M. Bouillaud commences his observations by the detail of seven cases, which serve as a basis to his new theory: of these, two have already been referred to in this Journal; and the following are abstracts of the others:—

Case 1st.—A female, aged fifty-five years, was admitted into the Hospital Cochin, labouring under pulmonary tubercles and chronic enteritis, accompanied with œdema of the lower extremities: she died forty-five days after her admission. On opening the body, a cancerous tumour was found, formed by the rectum, uterus, cellular tissue, and surrounding ganglions. The hypogastric and iliac veins, which traversed, as it were, this enormous tumour, were obliterated by a fibrinous, reddish, old, and apparently carnified coagulum: the obliteration extended downwards the whole length of the crural veins, and upwards into the vena cava, as high as the right kidney: towards this part the coagulum was of a lesser consistence, somewhat resembling the lees of wine.

*Case 2d** has been already given in this Journal.

Case 3d.—A man, aged sixty years, was received into the same hospital, labouring under chronic pleurisy and peritonitis. On his admission, his lower extremities alone were œdematous; but on the following days the œdema extended to the scrotum, and soon afterwards even to the axillæ: it did not, however, affect the face or upper extremities. After the expiration of some time, the dropsy of the cellular tissue of the trunk and scrotum disappeared, and it was at the same time observed that the veins of the abdominal parietes acquired a very considerable size, and became somewhat varicose. Seventy-five days after his admission he died, still labouring under the infiltration of his lower extremities. On *dissection*, the right kidney was found to have degenerated into a cancerous, encephaloid substance, forming a tumour equal in size to half the liver. This enormous tumour had compressed and flattened the vena cava towards its division into the iliacs: the canal of this vessel, which was wholly impermeable, was distended and obliterated by a fibrinous, friable, pulraceous matter, bearing some resemblance to the disorganized tissue of the kidney. The emulgent veins, the veins of the pelvis and of the lower extremities, were also obliterated by blood, which had been a very long time coagulated. The veins of other parts contained liquid blood.

Case 4th.—A female, aged twenty-one, died from the effects of typhus: on her admission into the hospital the left

lower extremity was œdematous and painful. She died nine days afterwards. On *dissection*, the veins of the affected limb were found obliterated by a long, solid, reddish, fibrinous, fleshy-looking coagulum, which extended as high as the vena cava. The veins of the opposite limb contained liquid blood. Their internal membrane was less red than that of the obliterated veins.

Case 5th * has also been already given.

Case 6th. — A female, aged thirty years, three months after delivery, was admitted into the Hospital Cochin, with symptoms of most severe peritonitis, and with the left lower extremity in an anasaruous state. Seven days after her admission she died. On *dissection*, an enormous abscess was discovered in the pelvis, which appeared to have begun in the left side of the cavity, in the anterior part of the psoas muscle. The whole of the surrounding parts were in a truly frightful state of disorganization. The left iliac and hypogastric arteries and veins, which were situated in the midst of the purulent mass, were thickened. The external layers of their parietes were disorganized and of a lardaceous appearance. The veins of the anasaruous limb, not excepting the great saphena, were obliterated by a solid, fibrinous, and friable coagulum. The other veins were pervious.

Case 7th. — A female, aged seventy-five years, was admitted into the hospital, labouring under chronic pleurisy and pulmonary tubercles: the left lower limb was œdematous, and the sub-cutaneous veins of the leg were varicose. Seven days after her entrance, this woman expired. On *dissection*, the sub-cutaneous veins of the leg, and the left crural and iliac veins, were found completely obliterated in the same manner as in all the preceding cases. The other veins were, in general, free, and contained black liquid blood.

The foregoing histories certainly go far to corroborate the theory laid down by M. Bouillaud: in addition to which it may be well to observe, that Morgagni relates the history of a woman who died whilst affected with infiltration of one of the limbs; and, on *dissection*, the femoral vein was found to be filled by a sanguineous concretion; the correspondent iliac vein was obliterated.

After referring to a case mentioned by Hodgson, and to others cited by Breschet, in his treatise on *Inflammation of the Veins*, from Travers, Raikem, Bodson, &c. M. Bouillaud observes, that it is not uncommon to meet with infiltration of one or both of the lower limbs in women recently delivered. On the *dissection* of such instances, as in cases fifth and sixth

above detailed, he has met with obliterations of the crural veins. For analogous examples, the works of Chaussier, Meckel, and Travers, are referred to.

The author next proceeds to notice the opinion of Hodgson, that dropsies are not, in general, the consequence of the obliteration of a principal vein.

"This assertion," says he, "which is founded on three or four facts only, is in contradiction to the numerous observations which have just been related. I am, however, very far from calling in question the facts which are adduced as proofs that obliteration of the veins is not, *in general*, followed by dropsy. I may merely observe, that this proposition is wanting in correctness. Mr. Hodgson, ought to have said that venous obliteration is not constantly accompanied by dropsy. Besides, the negative facts of which he speaks are simple exceptions to a general law. What do they prove? That this same nature which is so ingenious in re-establishing the arterial circulation in a limb, the principal artery of which has been tied, is equally possessed of means for keeping up the course of the venous blood in a limb, the principal veins of which are obliterated. These means consist in innumerable communications established between every part of the venous system. It is proper, however, to remark, that the collateral venous circulation is much less active than the collateral arterial. Thus, in twenty cases, I have never observed the venous circulation become re-established in those limbs, where it had been interrupted.

"If the course of the venous blood becomes restored with very great difficulty in a limb, the principal veins of which are impermeable, it is not the same when less important and, as it were, secondary veins are obliterated. This is the reason why, in cases of obliteration of the sub-cutaneous veins of the fore-arm, as may occur in consequence of inflammation of those vessels, after bleeding, the venous circulation is scarcely disturbed. For the same reason, varicose veins of the lower limbs may be excised without running the risk of producing serous infiltration. In these different circumstances, the deep-seated veins of the limbs remaining free, the venous circulation goes on with the greatest facility."

M. Bouillaud next proceeds to apply his principles to the case of ascites, or rather, to that species which he has called *passive* ascites; and refers to three cases in which similar phenomena were observed regarding that disease, as in the case of infiltrations of the lower extremities.

Case 1st.—In 1819, on the dissection of an individual who succumbed under a tuberculous *engorgement* of the liver, the author found the trunk of the vena portæ obliterated by a very old fibrinous coagulum. The peritoneum was healthy; its cavity contained much yellowish fluid.

Case 2d.—A woman, aged thirty-eight years, had been affected with jaundice for eight months, when she was ad-

mitted into the Hospital Cochin. Fluctuation was very manifest in the abdomen; and through the parietes, in the right side, an enormous tumour could be felt, the nature of which it was difficult to ascertain. She died in a state of marasmus twenty days after her admission. The limbs were never at all cedematous. On *dissection*, a great quantity of yellowish fluid was found in the peritoneal cavity; the peritoneum was healthy. The tumour which had been felt through the abdominal parietes, was nothing more than the gall-bladder, so much dilated as to equal, in size, the head of an infant: it contained bile and a hundred biliary calculi. A considerable tuberculous mass, occupying the inferior part of the liver and a portion of the pancreas, compressed the ductus hepaticus, cysticus, and cholédochus, as well as the trunk of the vena portæ. The first were impermeable. The vena portæ was obliterated by a clot of blood similar to those before described.

Case 3d.—A patient, aged fifty, was admitted, labouring under icterus and ascites. The upper and lower limbs presented no infiltration. Three weeks after her admission she died. On *dissection*, the trunk of the vena portæ was found to be filled and obstructed by a fibrous, corrupted, pultaceous matter, formed by blood which had been for a long time coagulated. The inferior surface of the liver had become degenerated into a tuberculous substance, in which, by the most minute research, no vestige of the hepatic, cystic, and choledochus ducts, could be discovered. The gall-bladder was so much disorganized, that it could not be easily recognized. It contained a dirty, purulent liquid, in which several biliary concretions were observable: it adhered to the arch of the colon, and if the patient had lived longer, a communication would have been established between the intestine and the gall-bladder, so that the biliary calculi might have been discharged *per anum*.

Such are the principal facts and considerations adduced by M. Bouillaud in the communication before us, in support of the theory which he has embraced regarding the general cause of serous infiltrations; and although they may be considered to, and assuredly do, require farther investigation, yet, so far as they go, they throw considerable light on the pathology of hydropical affections: how far venous obstruction may be considered a general cause of serous infiltrations, remains to be proved by future observation. We have shown above, that in M. Bouillaud's opinion they are. With our author's deductions from the facts and considerations of which we have given a sketch, we shall conclude our analysis.

1st. "Obliteration of the veins is a cause of *dropsy* in the part where such obliteration is situated: as this obliteration never occu-

pies the whole of the venous system, the dropsies, produced by it, are *partial*: it has been an error to attribute these *local* dropsies to a *general* debility, or to an atony of the lymphatic vessels: obliteration of the veins coinciding with dropsy, is a pathological fact which confirms the new doctrine of absorption.

2d. "Passive general dropsies are owing to some obstacle to venous circulation: these dropsies are only general by reason of the seat of the obstacle which exists at the centre, and as it were at the confluence of all the venous system.

3d. "That it is highly necessary to avoid confounding the drop-sical affections, treated of in this work, with those which are the result of a chronic inflammation of the serous membranes; they are essentially different — the cause of the former is wholly *mechanical*; that of the latter entirely *vital*."

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

I. *Alteration of the Anterior Part of the Spinal Marrow, observed at the Hospital of Charenton.* By M. ROYER COLLARD.

Sprevale, born at Salines, in Piedmont, April 18, 1760, on the half-pay of the fifth demi-brigade of veterans, entered the hospital of Charenton October 17, 1806, and died March 3, 1823.

No information can be obtained as to the situation of this man before he entered the hospital: during the first ten years of his residence there he remained silent, idle, liking nothing but his bed, scarcely answering the questions that were asked him; his walk was unsteady, his lower extremities were tottering, his upper ones were free, his pulse was feeble and slow. His apathy sometimes left him, and he became peevish and mischievous, endeavouring to strike all whom he met. The pelvic extremities becoming more and more feeble, he was at length unable to walk, and he remained about seven years with his thighs bent upon the pelvis, and the legs upon the thighs, "*without ever moving these parts, which nevertheless retained their sensibility.*" He still understood what was said to him, but his answers were not articulate; his intellectual faculties were almost annihilated, and he lived only to drink, eat, and occasionally fly into a rage. His excretions were made involuntarily. Three weeks before his death he was taken with a looseness, which became more and more abundant; his pulse was almost insensible; his emaciation was extreme. The trochanters and the perineum soon became excoriated.

Appearance after Death.—The skull hard as ivory, and three times as thick as when in a healthy state; the cerebral and spinal dura mater is thickened, but not injected; the arachnoid is healthy throughout.

The pia mater of the brain presents nothing remarkable; "that which

covers the corpora olivaria and pyramidal eminences, as well as the anterior faces of the spinal marrow, is very dense, of a bluish colour, and marked with dots. This colouring is bounded on each side by the anterior roots of the spinal nerves and the dentated ligament; above, it insensibly diminishes on the development of the cerebellum, on the upper edge of which no trace of it is seen; below, it finishes with the spinal marrow. This membrane being taken away, the olivarian and pyramidal bodies are found of a greyish colour, and as soft as bovillie; the softness continues, but gradually diminishes along the whole anterior part of the marrow, and almost through the whole thickness of the bundles of fibres which form it; towards the encephalon it may be traced across the commissure of the cerebellum into the crura of the brain, the optic thalami, the striated bodies, and some of the cerebral convolutions, particularly towards the middle part of the right side. The anterior roots of the spinal nerves can also be distinguished on the fasciculi which give them origin, but they have not their accustomed consistency.

All the other parts of the brain, besides those which we have mentioned, are, as well as the cerebellum, in their natural state; but the commissure of the latter is more firm than ordinary, and affords a striking contrast with the softness of the neighbouring parts.

The posterior face of the spinal marrow, and the membrane which covers it, are sound. There is nothing to be remarked in the breast; a little serum is effused in the abdomen, and some light red spots exist on the peritoneum: the internal membrane of the stomach is bluish, dotted almost throughout its whole extension; that of the intestines presents some red spots.

The pelvic members cannot be extended, (thirty hours after the patient's decease the thoracic members became flaccid); after cutting the muscles which move them, they were rendered moveable. There is much synovia in all their articulations.

M. Magendie inquires, is not this case calculated to enlighten our views respecting the distinct properties of the anterior and posterior parts of the spinal cord? However, it should be added, that the movements of the arm in this case were partly preserved; the writer of the case says they were not, but M. Royer Collard informed M. Magendie, verbally, that they were. However, this last circumstance shows the necessity of a farther examination of the anatomy of the spinal cord and of its vital phenomena. This part of the nervous system is much more complicated at its superior region than any where else, and we know nothing of the functions of the corpora olivaria, of the anterior and posterior pyramids, &c. M. M. is at present investigating these points.—*Journ. de Phys.*, Avril 1823.

II. *Emetics useful in counteracting the inordinate Effects of Mercury.*

During the last autumn, Dr. Richard Field, of Petersburg, Virginia, in treating one of his patients for a profuse hemorrhage of the bowels, brought on by the inordinate action of calomel, with his favourite prescription, consisting of opium, ipecacuanha, and sugar of lead, gave the remedy in rather large doses, and the stomach being extremely irritable, violent vomiting was excited. The patient, at the time, was labouring under a most profuse salivation, amounting even to sloughing of the mouth and fauces. The hemorrhage was soon suppressed, (an instance illustrative of the utility of vomiting in hemorrhage,) and with an almost simultaneous arrestation of the mercurial affection.

Having a mind always susceptible of improvement, and of unbounded zeal in his profession, Dr. Field determined to profit by the hint thus given, and was induced to make a farther trial of the remedy, in some other violent cases of salivation then under his care, and which had resisted the usual mode of treatment. The effects of the plan were not less beneficial than in the first instance.

Not long after this, I happened to be in Petersburg, and meeting with Dr. Field, he informed me of the decided advantage which he had derived from emetics, under such circumstances, and assured me that he had not been disappointed in a solitary instance, referring me to several other respectable practitioners of the town, who, he said, would bear ample testimony to the efficacy of the practice. I was then requested to inform my preceptor, who was once a pupil of Dr. Field, on my return to the country, of the circumstance, and which I accordingly did. Confiding in every thing coming from Dr. Field, my preceptor immediately made an extensive trial of the remedy, and in a short time was enabled to corroborate all which had been previously said in favour of it.

On the whole, from what I have myself seen of the utility of emetics in arresting inordinate salivation, and the gangrene resulting from it, I think I am warranted in pronouncing the practice a most important medical improvement. — *Extract from the Thesis of Dr. Haskins of Pennsylvania.*

III. *A Solution of Opium in Nitric Acid, beneficial in Hectic Fever.*

We have employed, says Dr. Harrison, a distinguished Physician of Louisville, Kentucky, opium dissolved in nitric acid, with effects decidedly and eminently beneficial in hectic fever. One drachm of opium is dissolved in one ounce of nitric acid, in an open vessel, to allow the nitrous fumes, which are disengaged, to escape. According to the condition of the system, we give twenty, thirty, or forty drops, three times a day.

When it manifests an action too predominantly narcotic, we diminish the quantity of the opium. But a sufficient quantity of opium must be dissolved, so as to calm the hectic irritation, at the same time the accompanying acid imparts strength. We have witnessed one case of entire recovery with this combination when nitric acid alone, mercury to a ptyalism, opium, &c. were tried with little benefit. Even in cases, where the prospect was clouded by the shadows of death, life was evidently prolonged, and the passage to the grave rendered more smooth and gentle, by its administration. — *Philadelphia Journal, No. 11.*

IV. *Shock of an Earthquake felt at Sea.*

The following account of a curious phenomenon was communicated to us by our friend Mr. Parsson, who was at the time Surgeon of the ship in question:—

On Sunday the 10th of February, 1823, at ten minutes past one P. M., the Honourable East India Company's ship *Winchelsea*, on her passage from Bengal to England, when in lat. 52 min. N. long. 85. 33. E., experienced a shock similar to that of an earthquake. Every individual on board was alarmed by a tremulous motion of the vessel, which gave a sensation as if she were passing over a coral rock; at the same time a loud rumbling noise was heard, similar to that communicated by the rolling of a butt along the deck. This agitation and noise continued at least for two or three minutes. The captain, being at the time in the round-house, looked out at the stern windows, but there was no appearance of any shoal; this he must have seen had any existed, as the water was remarkably clear and smooth, and the ship not going more than two knots an hour; indeed, she was considered to be out of soundings at the time. One singular circumstance to be mentioned is, that during the continuance of this phenomenon, there was no perceptible commotion in the sea. The *Winchelsea* was at this time some hundred miles from any land. This remarkable phenomenon cannot be accounted for in any other manner than by referring it to some volcanic eruption in one of the islands eastward of the bay of Bengal.

V. Half-yearly Medical Report of the Hospital for the Casual Small-Pox and Vaccination, at St. Pancras.

The proceedings of this establishment during the last six months have not been marked by any circumstances of peculiar interest; yet they have, nevertheless, been silently working a great deal of public benefit; and while it must be satisfactory to the governors to know that their charity has been effectively applied, it may not be unprofitable to the public in general to have their attention re-awakened to the only form of human suffering which mankind universally anticipates.

Eighty-four patients have been admitted into the Small-Pox Hospital, between the 19th of December, 1822, and the present date; 49 have had the disease in a severe and dangerous degree,* and of them 23 have died. Nine remain under treatment.

Among the 35 persons who passed through the complaint in a mild form, 24 had been previously vaccinated; and the influence of this process, in stripping the small-pox of its most formidable features, was never more strikingly manifest than in the period now under review. None of them died. While the natural small-pox indeed was raging with a degree of violence which hardly admitted of control by medical aid, those who had been vaccinated remained in comparative security, experiencing no other inconveniences than what result from the visitation of casual disease.

Strongly impressed, by the result of another half-year's experience, with a sense of the benefits of vaccination, your Physician is gratified by having to report that in the same period 1605 persons have been vaccinated; and that with the full knowledge of the occasional failure of this protection, the public voice is still decisively raised in its favour. Your Physician cannot, in this place, avoid an allusion to the conduct of some persons, heretofore strenuous advocates of vaccination, who have recently shown a disposition to desert it, because it does not fulfil *all* the expectations which a benevolent, but too sanguine feeling had once indulged. It behoves such persons (before they recur to inoculation, which experience has proved to be so pregnant with danger to the *public* welfare) seriously to consider, whether the failures of vaccination may not, in some degree, be attributed to causes under our control; and whether the alternative proposed may not, even as far as the individual himself is concerned, be as dangerous as the evil to be avoided. Your Physician, judging from the experience acquired in this establishment, is disposed to reply to both questions in a manner favourable to the cause of vaccination. He is convinced that a stricter attention than what once was bestowed on the process of vaccination, will assist materially in reducing the number of failures; and he is further of opinion, that the inoculated small-pox is equal in point of severity to the same disease, as it occurs casually subsequent to vaccination.

Your Physician therefore, in conclusion, again presses on the attention of the governors the importance of affording every encouragement to vaccination.

GEORGE GREGORY, M.D.

VI. Annual Report of the General Committee of the Associated Apothecaries and Surgeon-Apothecaries of England and Wales, received and adapted at the Annual General Meeting of the Association, held by Public Advertisement at the Crown and Anchor Tavern, Strand, July 2, 1823.
JOSEPH HAYES, Esq. President.

Your committee, in compliance with annual custom, submit to the Association the result of their proceedings since the last general meeting.

The meetings of the committee have been regularly held, although there

* Our correspondent would oblige us by informing us if any of the 49 severe cases had been previously vaccinated. — EDITORS.

has been but little business to transact, and that little of no particular interest or urgency.

The committee have not, however, been indifferent to the objects for which the Association was formed; and in the first volume of Transactions, now nearly completed, although necessarily partaking of the imperfections incident to the commencement of a new undertaking, they trust will be found an earnest of the zeal which they entertain for the welfare of the Medical Profession, and of their sincere desire to render the exertions of its members subservient to the public good and the best interests of humanity.

Viewing, as they do, with satisfaction the success which has so far attended the exertions of this Association in the improved state of medical education, particularly in that of the general Practitioner, they still hope to witness further benefits, which cannot ultimately be otherwise than reciprocal between the Profession and the public.

Well aware of the difficulties which attended the passing of the Apothecaries' Act, and of the opposing obstacles which prevented the fulfilment of the laudable wishes of the Association with which it originated, and of the Profession at large, in rendering it fully adequate to its proposed end, the committee still cherish the hope of obtaining further improvements through the medium of the Legislature, which, whilst they may afford the necessary protection of the various members of the Profession, shall be founded on a more dignified and extensive basis,—the public good.

They therefore abstain, in the present instance, from any other than general allusion to the imperfections of the existing state of the Medical Profession, and of the legislative provisions relative to it, or the means required to effect the necessary meliorations. The work of improvement is slow and laborious; but when attempted with zeal, and carried on with perseverance, and with a purity of motive, which the end desired must show to be above suspicion, it cannot be otherwise than progressive.

They who now labour to place the practice of medicine upon a footing more consistent with its real dignity and usefulness, can scarcely expect personally to reap any benefit, unless the consciousness of having strenuously exerted themselves to effect the diminution of human suffering can be supposed to bear such an interpretation.

As an accurate knowledge of the present state of the Medical Profession can be the only ground-work of any rational attempt to effect improvement, the committee beg leave to recommend to the Association that it be therefore an instruction to the future committee:—

1. To ascertain, as far as may be practicable, the actual condition of the Medical Profession, and the obstacles which have hitherto impeded its advancement.
2. To examine and to arrange the imperfections to which its present condition is liable; showing the particulars in which the public and members of the Profession are injured or aggrieved.
3. To point out the remedies for the evils complained of.
4. To use such means, as may to them seem proper, to effect (whether by application to the Legislature or by other legal means) the meliorations to be desired.
5. To continue to collect and record the experience of the Profession on subjects relating to medical science, and to publish the same in occasional or annual volumes, calculated to prove the just claims of the different classes of the practitioners of the healing art to that confidence of the public which they have so long enjoyed.
6. To give a brief account of the discoveries and improvements which have been made in medicine, surgery, and the accessory sciences, within the preceding year.

7. To offer such encouragements of honorary rewards as may to them (the committee) seem proper, for the best practical essays on select subjects relating to medicine and surgery, as may call forth the energies, particularly of the younger members of the Profession, and elicit improvements in the healing art.

8. That the profits arising from the publication of the Transactions of this Association be devoted to the above-named laudable purpose.

Published by order of the Meeting,

1, Keppel Street.

JOHN POWELL, Secretary.

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

Practical Observations in Surgery. By Henry Earle, F. R. S. Assistant Surgeon to St. Bartholomew's Hospital, and Surgeon to the Foundling. With plates. 8vo. pp. 230. London, 1823.

A considerable part of this volume is occupied with observations on fractures within the hip-joint and at the upper part of the thigh, with critical remarks on that part of Sir A. Cooper's work which treats of the same subject. As we deferred reviewing Sir Astley's work longer than we intended, owing to the circumstance of learning that Mr. Earle's work would soon appear, in which a different view would be taken of fractures in the vicinity of the hip-joint from that entertained by Sir Astley, and owing to a wish of embracing both works in the same review, and thus of bringing the subject fully before our readers, we now consider it still farther incumbent on us to defer our review still longer, as we find that a third edition of Sir Astley's excellent work will soon appear, in which the criticisms of Mr. Earle are to be answered. By adopting this plan we shall have the very difficult and perplexing subjects at issue fully brought before us, and consequently be enabled to give a more satisfactory view of, and opinion respecting them—"Tros Tyriusve mihi nullo discrimine agetur."

The other topics which Mr. Earle's work embraces are—Description of a Bed for the relief of patients labouring under accidents and diseases requiring rest:—Observations on Fractures of the Olecranon, &c.; with critical remarks on the diagnosis of that accident:—On Injuries in the vicinity of the Shoulder-joint; with a description of an Apparatus for the more effectually securing the upper extremity:—On the Re-establishment of a Canal in the place of a portion of the Urethra which had been destroyed:—And on the Mechanism of the Spine.—We can, at present, only add that these subjects are ably and ingeniously treated by Mr. Earle.

FOREIGN.

I. *Phytopharmacie Médicale, ornée de Figures coloriées de Grandeur naturelle, où l'on expose l'Histoire des Poisons tirés du Règne Végétal, et les Moyens de remédier à leurs Effets délétaires, avec des Observations sur les Propriétés et les Usages des Plantes Héroïques.* Par Joseph Roques, Chevalier de la Légion d'Honneur, Docteur en Médecine de la Faculté de Montpellier, ancien Médecin des Hôpitaux Militaires, Membre de plusieurs Académies et Sociétés savantes. Chaque Livraison, deux ou trois feuilles de texte, et cinq planches. 4to. 8 francs.

We have received 21 *livraisons* of this excellent work, and can speak in terms of the highest praise regarding its execution: the text is written by a man well informed of the subject on which he treats, whilst the plates are beautifully finished, and correct representations after nature. One *livraison* appears regularly each month. It will consist of 36 in all, and when completed will form a valuable addition to the library of the Physician or Naturalist.

II. Dictionnaire de Médecine par MM. Adélon, Béclard, Biett, Breschet, Chomel, H. Cloquet, J. Cloquet, Coutanceau, Desormeaux, Ferrus, Georget, Guersent, Lagneau, Landré-Beauvais, Marc, Marjolin, Murat, Orfila, Pelletier, Raige-Delorme, Rayer, Richard, Rochoux, Rostan, Roux, et Rullier. En 18 volumes. Tom. 7ème. DIG—ENC.

The seventh volume of this interesting work has just appeared, and is not at all inferior in execution to its precursors. The principal articles comprised in it are the following:—*Dynamomètre*, *Effort*, *Encéphale*, (physiol.), by Adélon—*Egagropyle*, by Breschet—*Dysenterie*, by Chomel—*Encéphale* (anat.) by H. Cloquet—*Ectropion* and *Encanthis*, by J. Cloquet—*Eclectique* and *Elément*, by Coutanceau—*Dystocie*, *Eclampsie*, and *Embryotomie*, by Desormeaux—*Douleur*, *Dyspepsie*, and *Encéphale* (path.) by Georget—*Diurétique*, *Eaux minérales* (thérap.), *Electuaire*, *Elixir*, *Emeto-cathartique*, *Emménagogue*, *Emollient*, and *Emplâtre*, by Guersent—*Dyspermatisme* and *Ecoulement*, by Lagneau—*Dilatation* and *Ecchymose*, by Marjolin—*Elévatoire*, *Embaumement* and *Emphysème*, by Murat—*Eau* (chimie), *Eaux Minérales* (chimie), and *Empoisonnement*, by Orfila—*Eaux distillées Aromatiques*, *Eaux spiritueuses*, *Elaine*, and *Emétine*, by Pelletier—*Dogmatique* (école), *Dysphagie*, *Empirique* (école), *Empirisme*, by Raige-Delorme—*Ebullition*, *Elephantiasis*, *Embaras gastrique et intestinal*, by Rayer—*Digitale*, *Ellébore*, by Richard—*Douche* by Rochoux—*Eau* (hygiène), by Rostan—and finally, *Digestion*, by Rullier.

WORKS RECEIVED FOR REVIEW.

I. Practical Observations in Surgery. By Henry Earle, F.R.S. Assistant Surgeon to St. Bartholomew's Hospital, and Surgeon to the Foundling. With plates. 8vo. Underwoods. London, 1823.

II. An Outline of Hints for the Political Organization and Moral Training of the Human Race: submitted with deference to the consideration of those who frame Laws for the Civil Government of Man, and more especially for those who direct, or profess to direct Man to the true worship of the Deity. By Robert Jackson, M. D. 8vo. pp. 253. Baldwin & Co. 1823.

III. Prison Labour, &c. Correspondence and Communications addressed to his Majesty's Principal Secretary of State for the Home Department concerning the Introduction of Tread-Mills into Prisons, with other Matters connected with the Subject of Prison Discipline. By Sir John Cox Hippesley, Bart. D. C. L. F. R. & A. S. S. a Benchet of the Inner Temple. 8vo. pp. 228. Nicol and Rivington. 1823.

LITERARY INTELLIGENCE.

In the press, the third edition of Sir Astley Cooper's Work on Dislocations and Fractures of the Joints. An Appendix will contain a Refutation of almost every Statement made in a late critical publication, on a subject treated of in the former editions of the above work.

Mr. Plumbe has in the press, a Treatise on Diseases of the Skin, intended to comprise the Substance of the Essay for which the College of Surgeons have awarded to him the Jacksonian Prize, a reprint of his Essay on Ringworms, &c. and copious Notices of such Improvements as have been made in the Pathology and Treatment of Cutaneous Diseases generally since the publication of Bateman's Synopsis.

NOTICE OF LECTURES.

Mr. Greening, of Aldersgate Street, Consulting Accoucheur to the City Lying-in Charity and the London Midwifery Establishment for delivering Women at their own Habitations, will commence a Course of Lectures, early in the month of October, on the Theory and Practice of Midwifery, and on the Diseases of Women and Children.

THE METEOROLOGICAL JOURNAL,
From the 19th of JUNE, to the 20th of JULY, 1823,
 By Messrs. HARRIS and Co.
Mathematical Instrument Makers, 50, High Holborn.

June.	Moon.	Therm.			Barom.		De Lac's Hygrom.		Winds.		Atmo. Variation		
		Rain Gauge.											
		9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	9 P. M.	10 P. M.
20		60	70	55	29	84	29	80	67	70	N	N	Fine
21		55	64	50	29	76	29	90	70	69	N	N	Ovc.
22		52	55	49	29	85	29	87	67	68	N	N	Ovc.
23	☉	59	62	54	29	74	29	72	68	67	W	WNW	Fine
24		66	64	55	29	70	29	70	69	68	SW	SW	Fine
25		57	62	57	29	64	29	50	70	70	N	SW	Sho.
26	.03	60	68	61	29	44	29	34	60	73	SW	SE	Sho.
27	.05	57	67	57	29	20	29	11	73	73	E	SSW	t.&r. Rain
28	.09	59	67	60	29	14	29	25	75	78	SSW	SW	Rain
29		65	68	55	29	46	29	53	78	80	SW	SW	t.&r. Fine
30	.02	62	67	60	29	74	29	68	74	76	SW	S	Ovc.
1	D	65	68	61	29	71	29	80	79	80	NNE	SSE	Rain
2		66	70	56	29	80	29	83	77	78	SSW	E	Fine
3		67	68	57	29	84	29	90	70	75	NNE	NNE	Fine
4		60	62	58	29	83	29	77	79	79	SSE	SSW	Rain
5		61	68	60	29	76	29	70	78	80	SSW	SSW	Fine
6		62	68	60	29	70	29	54	77	78	SSW	SSW	Fine
7		61	65	55	29	50	29	50	75	79	SW	WSW	Rain
8	.47	63	64	49	29	50	29	53	73	76	WSW	W	Fine
9		60	65	49	29	73	29	80	67	68	W	WSW	Fine
10		59	63	50	29	86	29	75	60	61	WSW	SSE	Fine
11		60	70	56	29	54	29	52	59	59	S	SSE	Fine
12		60	69	52	29	50	29	55	57	55	SSW	SSW	Fine
13		59	64	54	29	58	29	54	54	67	S	SSW	Rain
14		61	65	54	29	50	29	60	53	54	SW	SW	Fine
15	.29	60	63	55	29	60	29	40	51	53	SSW	SSW	Rain
16	.31	59	64	50	29	41	29	40	50	57	SSW	SW	Sho.
17	.40	60	63	55	29	64	29	72	54	56	W	NW	Fine
18		61	62	57	29	60	29	63	80	85	SSE	W	Rain
19		60	65	68	29	75	29	72	75	78	SSW	SW	Rain

The quantity of Rain that fell in the month of June was 9 in. 25-100ths.

Notice to Correspondents.—Communications have been received since our last from Dr. Shearman, Dr. Kennedy, Mr. Callaway, Mr. Bullen, Mr. Iliff, Mr. Cribb, Mr. Boyle, Mr. Barnard, Mr. Desormeaux, and Mr. Amesbury.

. In consequence of the copper-plate printers having provided an insufficient number of the Plate of Mr. Painter's Case of Ovarian Fecundation for the preceding Number, those of our Subscribers who did not receive it may obtain it by applying to their Booksellers.

. Communications are requested to be addressed (post paid) to Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 117. SEPTEMBER 1, 1823. VOL. XX.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Observations on the Power of the Arteries in carrying on the Circulation of the Blood, on the Nature of this Power, and on the Manner of its Exertion. By WILLIAM SHEARMAN, M.D. Member of the Royal College of Physicians, and Physician to the London Dispensary.

THE doctrine of the circulation of the blood being one of the most important in physiology, it becomes desirable that our notions of the powers producing and regulating the course of that fluid through every part of the body should be correct and well-founded. It has long been taught that the circulation of the blood depends upon the contraction of the heart, as the *primum mobile* or centre of action, assisted by that of the arteries, the structure of which vessels is in some degree muscular, adapting them to this office. The principles upon which this theory was established have long been acquiesced in, and, indeed, they appear to be supported by demonstrable proof, the nature and extent of which are too well known to require repetition here. But we are now called upon by physiologists of no little authority and reputation to discard our antiquated notions, and to adopt opinions repugnant to all our former conclusions, derived, as had been supposed, from actual observation and

reasonings grounded upon evident facts; and this on penalty of a stigma not a little appalling.* It is not my intention to enter into a critical examination of the new doctrines proposed to us, with a view either to support or refute their pretensions; but I hold it to be reasonable, that previously to surrendering our former opinions, we should be allowed to express such doubts as may occur to us, touching the validity of the conclusions deduced from the reasonings and experiments of these distinguished philosophers.

It is not possible, within the compass of a single paper, to advert to every point embraced in the various publications on the physiology of the circulation; I shall, therefore, confine myself to a consideration of the share of power in carrying on the circulation (if any) possessed by the arteries, and the nature of this power, with the manner of its exertion.

The publications on this subject which have chiefly attracted my notice, are those of Dr. Lucas on the Principles of Inflammation and Fever, and of Dr. Parry on the Nature, Cause, and Variety of the Arterial Pulse, &c.; and it is remarkable that these two authors are at direct variance on one very material point—the power of the arteries in promoting the circulation; the former attributing the propulsion of the blood to the action of these vessels, the latter denying them any share whatever in this effect. Dr. Lucas's opinion being in unison with that most usually hitherto entertained, although probably incorrect as to the nature of the action of the vessels, to which subject I shall hereafter revert, it is only necessary to consider the proofs and arguments in favour of the passive state of the arteries during the flow of blood through them.

Various experiments were made by Dr. Parry to confirm his opinion, that arteries suffered no dilatation nor contraction during the systole or diastole of the heart. We might object *in limine* to all conclusions deduced from experiments made under circumstances different from the natural and ordinary state of the animal operated on, as all vivisections must unavoidably in some measure be; but granting that no visible pulsation appears in a denuded artery, it is certain that a pulsation may be felt on applying the finger over an artery in its natural state; and how is this to be explained?

“The blood in every part of the arterial system may be considered as a set of continuous columns, possessing little compressibility, and filling the tubes in which they are con-

* “It is hardly credible that any man can continue to support the old doctrine, who is at all open to the conviction of truth.”—*Medical and Chirurgical Review*.

tained. When, by the contraction of the left ventricle, the blood included in it is forcibly expelled into the aorta, all these columns receive the shock of propulsion at the same instant. But the velocity during this systole being greater than during the diastole, the momentum, and consequently the impulse, in every direction is also greatest in the systole. When, therefore, an artery is compressed with the fingers, in the usual mode of feeling the pulse, the blood, in consequence of the systole rushing into the artery with an increase of momentum, gives a stronger impulse of dilatation to the fingers, than from the less momentum which exists during the diastole, and thus produces the phenomenon of the pulse." — *Parry*.

On the other hand, I would contend, that the pulsation is occasioned by an actual contraction of the vessel, restoring it to its former diameter previous to the reception of the additional quantity of blood thrown into the arteries during the systole of the heart.

In proof of the former opinion, there appears to be nothing but the naked experiment, demonstrating that, under the circumstances of the experiment, no pulsation is visible. It seems to be admitted by every one that there must be some, however small, distention of the vessels during the systole of the heart; consequently, there must be subsequent contraction to a corresponding degree, at least; and the question seems to be, whether this contraction is at all appreciable by the senses? It is well known that many phenomena may be detected by one sense, which are not cognizable by another; and it does not necessarily follow, that because contraction of the vessel is not visible, it may not be felt by the fingers. If it be admitted that any contraction at all takes place in the artery to restore it to the diameter it possessed during the diastole of the heart, there is no limiting the force of that contraction; it may not only be sufficient merely to gradually restore the former diameter, but actually to contract forcibly upon the blood, and thus assist its propulsion; and this is the point at issue.

No one denies the contractile power of the arteries, which would seem to have been bestowed upon them in vain, if no action or exertion of it was requisite in the business of circulation, if the whole propelling power resided in the heart alone; but some experiments of Dr. Parry himself show, that the larger arteries "continuing to contract by their tonic and elastic properties after the heart has ceased to supply them with blood, necessarily propel all, or nearly all the blood they contain, through the capillaries into the veins." If the power of the arteries be sufficient to propel the blood for-

ward, independent of the heart's action, in some circumstances, is it unreasonable to expect that they also *constantly* contribute some assistance to the propulsion of the blood, and to suppose that the pulsation is the measure of this assistance?

One proof adduced in favour of the doctrine above mentioned, is stated, by the able reviewer in the *Medico-Chirurgical Review*, to be, "that the systole of the ventricle and the pulsation of the arteries are precisely simultaneous in every part of the system, and wherever we apply our finger, that the pulsations are perfectly *synchronous* from the root of the aorta to the minutest plantar twig." If this proof should not be founded in fact, if it shall appear that different arteries do sometimes pulsate variously and differently from the contraction of the heart, an original power of contraction cannot be denied them; and possessing this, there can be no reason why it should not constantly be called into action, as a part of the circulating force, auxiliary to that of the heart, the *primum mobile*.

That there are cases, and those very frequent, when the pulsation of some of the arteries, at least, is not synchronous with that of the heart, or even of other arteries, is evinced in various inflammations. I shall, on this subject, quote the words of an able author. "In a state of inflammation, the pulse of the inflamed part, in consequence of local excitement, is much more frequent than that of the heart or any other organ. Thus in a whitlow, the radial artery may give to the finger a hundred pulsations in a minute, while not more than seventy strokes may be exhibited in any other part of the system. The rapidity of the pulse is, in this case, usually in proportion to the degree of the inflammatory action; and hence, if the system should labour at the same time under ten different inflammations in different parts, or organs of a different structure, as glands, muscles, and membranes, it is possible that it may have so many different seats of pulsation taking place at such different parts at one and the same time, while all of them are at variance with the pulsation of the heart." * Here it is evident the pulsation is not occasioned by the systole of the heart, but by the contraction of the vessels themselves; and if in this case, why not in every case whenever pulsation is felt?

Another proof adduced against the appreciable contraction and dilatation of the arteries, is the small quantity of blood thrown out of the ventricle at each systole, not exceeding twelve drams; indeed, "the whole arterial system does not

* Good's Study of Medicine, Vol. II. p. 16.

contain, during the systole, an overplus of twelve drams; but only of about eight drams." "We would be glad to ask," says the able reviewer before quoted, "those physiologists who argue for alternate dilatation and contraction of the arteries, corresponding with the pulse, what perceptible or tangible increase of diameter in the vessels of the *whole arterial system* can be expected from such a quantity?" The fallacy of this reasoning consists in assuming, that the contraction and dilatation of the vessels must be proportioned to the force or momentum of the exciting cause; were the contraction of the vessel performed by a mechanical power, this would be true, for action and reaction must be equal; but here the contraction is the result of *vital* action, in which no certain proportion obtains between the amount of action and its exciting force. The functions of the heart and arteries are similar; the forcible contraction of the ventricle is not the result of the mechanical distention of that cavity by the blood poured into it, but a vital action to which the ventricle is roused by the stimulus of that fluid; the same thing is true of the arterial system; the stimulus of distention, even of the minutest quantity, produces action, exceeding in amount that which would be caused by a very considerable external force; the ordinary laws of mechanics and hydraulics have no place here.

Were the heart the sole propelling power, the arteries being passive or nearly passive tubes; were there, in fact, no contraction of these vessels, no pulsation of them but what was created by external pressure interrupting the flow of blood through them; what information could we derive from applying our fingers to the arterial tube, beyond that which may be obtained by applying them over the heart itself? the frequency of the contraction of the heart, or, perhaps, the force with which the blood is propelled? This last point, however, must be subject to much fallacy in feeling the pulse; the degree of momentum imparted to the finger must be proportioned to the pressure applied, and the consequent diminution of the arterial cavity. But there are certain indications obtained by feeling the pulse, which cannot be derived from the most accurate attention to the action of the heart alone, and which, therefore, seem to depend upon the state or action of the vessels themselves. I shall only instance the *hard* pulse and the *redoubling* or hæmorrhagic pulse, neither of which can I reconcile with the new theory.

I do not think the hard or contracted pulse depends upon the momentum of blood in the vessel, from the quick and strong contraction of the left ventricle (see Parry, p. 148); for this state of pulse, indicating, I should say, strong action in

the vessel itself, will frequently exist when the force of action of the heart is very much diminished. Nor does the explanation of a double stroke of one particular artery offered by Dr. Parry, p. 134 of his work, appear to be applicable to that general state of the arterial pulse expressed by the term *redoubling*, in which the force of action in the arteries exceeds the degree which usually obtains in health.

I might cite, as additional difficulties to the belief of the new doctrine, the frequent visible pulsation of the radial artery under the integuments, even when the muscles and integuments themselves are in the utmost state of relaxation, exerting no evident pressure; and the facility with which pulsation may always be felt with the slightest pressure of a single finger, quite insufficient apparently to diminish the diameter of the vessel the 100th part of an inch.

It appears to me that both Dr. Parry and Dr. Lucas are incorrect in ascribing the *contraction* of the arteries to elasticity; I believe, on the contrary, it will be found that their contraction is performed by a power *opposed* to and constantly *counteracting* elasticity.

"From various preceding considerations, it is natural, *à priori*, to conclude, that, when under the state not only of the usual healthy dilatation of arteries, but of that increased dilatation which often accompanies disease, the distending cause, which is a certain quantity or momentum of blood, is diminished, the elasticity will tend to contract them, so as within certain limits to accommodate them to the quantity of blood which they ought to convey."

The same idea of the contraction of the vessel being effected by elasticity, is expressed in the following sentence: "During health, the larger arteries of a living animal, as well under the diastole as systole of the left ventricle, are in a state of distention, to which they are forcibly impelled by their contained blood, against their mechanical power of elasticity." — P. 69.

"To bring the elastic principle into action, for the support of the circulation, with all the effect of which it is capable, it is necessary that the arteries should be in a state of forced distention, by which means a steady and permanent exertion of the elastic force will be kept up for the propulsion of the blood." "It must, indeed, be evident, that unless more or less of forced distention of the vessels were present, the elastic force could not be called into action at all for the propulsion of the current." — *Lucas*, pp. 22, 23.

Elasticity is not a vital property—it is inherent in the dead solid as well as in the living one; and the difference which exists in the diameter of a vessel during its life and after its

death, can only be effected by the power of this principle. Whatever may be the diameter of any vessel during life, there is always an increase of it after death; and as this increase cannot be effected by any vital power, it must be occasioned by some property inherent in the dead solid, and the only power the latter possesses capable of producing this increase is elasticity.

It is stated by Dr. Lucas, and the experiments of Dr. Parry are appealed to in confirmation of the fact, that the diameter of the vessels is considerably reduced after death; this may be true at the instant of the death of the whole animal, but the life of the different parts continues for a longer or shorter period, after the death of the animal as a *whole*, and this reduced diameter is effected by the *vital* property of the vessel endeavouring to contract upon its contents; some hours after death, when the vital properties of every part are extinct, the diameter of the vessels is always increased.

It is an important circumstance to ascertain whether, during life, the diameter of the arteries ever equals that point of dilatation to which elasticity brings them after death; for it is evident, that unless the diameter of the vessel exceeded the point at which elasticity would preserve it, this power can have no share in producing the contraction of the artery. I have been taught, and am still of opinion, that the arteries, at *their utmost distention* during life, are of less diameter than they are after death, when acted upon by elasticity alone. That in some of Dr. Parry's experiments, the diameter of the artery exceeded the point of elasticity, I am aware; but I am not satisfied that this increase is not to be attributed to some extraordinary and unusual distention arising out of the circumstances of the experiments; for in other experiments we find the distention did not equal the point of elasticity, as in Exper. 24, the left carotid, on exposure, measured $\frac{4}{8}$ of an inch, and the right $\frac{4}{8}$, whilst the elasticity of the latter was $\frac{4}{8}$; consequently any contraction during life could not have been effected by elasticity.

As tone or tonic, however, is influenced in its degree by the relative strength or weakness of the system, it may happen that, in old age,* this principle may be so much weakened as no longer to be able sufficiently to counteract the elasticity, and to prevent the vessel from being distended by a much slighter impulse than would formerly have been adequate to the effect; but in young and strong animals, in which the tone is in a vigorous state, the diameter of the

* The horses in which the diameter of the vessels exceeded the point of elasticity appear to have been old ones.

vessel never reaches that degree of dilatation to which the elasticity, if not counteracted, would extend them; and consequently, the elasticity can have no share in producing whatever contraction takes place in them.

The action of every mechanical power must be uniform; the force exerted by it must always be equal under similar circumstances; if the vessels were contracted by mechanical elasticity in accommodating themselves to their contents, the degree of contraction should be precisely equal under the loss of equal quantities of blood; but this is not the case: in Exp. 24, after the loss of the first $\frac{3}{8}$ viij. the vessel contracted $\frac{1}{10}$ of an inch; after the second bleeding, it contracted only $\frac{1}{10}$; the diminution of the force counteracting elasticity was in each case precisely equal, viz. the abstraction of a volume of $\frac{3}{8}$ viij. of blood, and if the contraction was effected by mechanical elasticity, that also should have been equal; but the contraction of tonicity varies according to the relative degree of strength or weakness in the system, and is not by any means uniform, vital properties not being governed by mechanical laws.

The mode adopted by Dr. Parry in estimating the relative force of elasticity and tonicity, in producing contraction of the vessel, is by no means conclusive: elasticity, according to him, has a tendency and exerts an effort to contract the vessel, and tonicity has precisely the same tendency, and exerts a like effort in the same direction; but the tonicity is not exerted until the contraction has reached the point to which elasticity will bring it, which in Exp. 24 was $\frac{1}{10}$. It may be asked, was tonicity now first imparted to the vessel, or did the vessel possess it previously to its contraction to $\frac{1}{10}$? If it did possess tonicity previously, and the tendency of this power was to act in the *same direction* with elasticity, viz. to contract the vessels, what proof have we that both powers were not exerted at the same time? or how can we determine that if one of these powers only was exerted, the tonicity was quiescent and elasticity alone acted, rather than that the tonicity was acting and the elasticity quiescent?

If the tone and contractility of the vessels acquired by life, and the elasticity inherent in them, are employed conjointly to produce diminution of diameter, both acting in the same direction, one of these powers would seem to have been bestowed unnecessarily; if elasticity is sufficient to produce the requisite contraction, of what use is the tonicity? There appears to be some inconsistency in saying, that "if the elasticity should be inadequate to the requisite force or degree of contraction, the tonicity, or vital power, may assume the office of contraction *where it was left by the elasticity, and*

carry it to the necessary extent." The elasticity would not become quiescent, it would now be counteracting the tonicity; and if the former power was able to bring the vessel to its mean point from a state of forced distention, why should it not also be able to bring it to the same mean point from a state of forced contraction?

The real fact appears to be, that the action of the heart and that of the arteries are precisely similar in performing the function of circulation. "The different compartments of the heart," says Dr. Parry, "are so far from expanding in consequence of the blood which is driven into them, that, *when altogether empty of blood, and even separated from the animal, they expand in a greater degree than when in their natural situation during life and healthy circulation.* Hence Mr. Hunter himself, notwithstanding the view which he gives of the action of the heart, acknowledges that this organ after death has a larger volume than when the animal is living." * The same thing is true of the arteries; they have an increased diameter after death; during life they contract themselves upon the blood when it is thrown into them, and propel it forward, not by their elastic action, but by a vital contractility opposed to elasticity; having done this, they expand or are relaxed by the effect of the elastic principle, and again *easily* admit the ingress of more blood, which again causes them to contract, not by its *forcible* distention, † but by its natural stimulus, and in this way they are capable of applying an additional force to that of the heart, so as to promote the circulation through the whole body. This appears to me, at least, a more probable conjecture than that the blood is circulated by the repeated shocks of propulsion given to it as a solid column, by the forcible action of the ventricle.

Whilst I am of opinion that Dr. Parry did himself great credit by undertaking the experiments brought forward in his work, and am fully disposed to allow the experiments themselves all the weight they deserve, I still do not think them conclusive; and I must agree with the able reviewer before quoted, "that it is exceedingly difficult, if not impossible, to ascertain, by unequivocal experiments, the functions of the

* P. 121.

† Dr. Lucas, even on his own theory, is probably mistaken in expecting any assistance from the elastic power of the blood-vessels, because the heart or other propelling power would expend as much force in distending the vessel and overcoming the elastic resistance, as would be derived from elasticity in the subsequent contraction.

complicated machinery employed in the circulation of the blood. We must, therefore, trust partly to reasoning and reflection, and partly to observation."

Northampton Square, July 19, 1823.

II.

Case of Axillary Aneurism, in which the Subclavian Artery was tied above the Clavicle, and the Patient recovered. By THOMAS BULLEN, Esq. Surgeon to the Lynn Dispensary, &c. &c.

THOMAS MITCHELL, sailor, sixty years of age, was admitted a patient of the dispensary March 31st, 1823, having a soft pulsating tumour, of an oval and conical form, situated on the right side, and extending obliquely from the sternal end of the third rib, to a little above, and within one-fourth of the humoral end of the clavicle. It could be partly emptied of its contents by pressure, but would gradually return to its former size on the pressure being removed; and at the same time, on applying the ear, a purring noise, at each systole of the heart, was very distinctly heard. The right arm and hand were frequently benumbed, and, at times, very painful and slightly swollen. The pulsation of the brachial and radial arteries was so feeble as scarcely to be felt.

About four months ago, a tar-barrel fell upon the shoulder, but occasioned him, at the time, only temporary inconvenience. At a consultation, it was agreed that an operation afforded him the best chance of recovery. To this he readily consented; and it was performed on the 3d of April in the following manner:—

The patient being placed on a chair, in a proper light, with his head held backward and to the left side, and the right arm brought forward, the integuments were drawn tightly downwards, and divided from near the sternum, upon and along the clavicle to the extent of four inches: a second incision was then made from the centre of the first, in the direction of the outer edge of the sterno-cleido mastoideus, by thrusting a sharp-pointed bistoury underneath the skin, which was pinched up between the finger and thumb. On turning back the outer flap, the external jugular vein was exposed. A needle, armed with a double ligature, was passed beneath the vein, the two ends were tied about an inch apart, and the vessel was divided between them.—Proceeding in the dissection to the level of the axillary plexus, a momentary interruption was occasioned by the posterior cervical artery,

which was greatly enlarged, running transversely from the sternal end of the wound. Being desirous of not dividing so large an anastomosing artery, after a little cautious dissecting, a blunt hook was passed underneath it, and it was turned out of the way. Some small arteries were divided, and immediately secured. Much inconvenience was experienced, after exposing the axillary plexus, by an oozing of blood from a division of the cephalic vein at the humoral end of the wound; it was, however, stopped by a pledget of lint. — At this stage of the operation, the spatulas of sheet copper recommended by Dr. Colles, of Dublin, and Mr. Liston, were made trial of, but were found of little assistance. A pulsation being distinctly felt at the bottom of the wound, by cautious procedure, partly with the handle of a knife and the finger nail, an artery, supposed to be the subclavian, was exposed and detached; a needle, made after the description given by Mr. Liston, and armed with a ligature, was passed underneath it without any difficulty. In doing this it was observed that the coats appeared thin, somewhat resembling a vein.* On turning this aside by means of the ligature, which was kept loose round it, the subclavian artery was seen and felt pulsating, a little cellular membrane merely intervening; and it was then conjectured that a nerve had been included in the ligature. The same method, in order to secure the artery, as above noticed, was proceeded in; but here some difficulty was experienced until it was more fully exposed by a partial division of the anterior scalenus muscle; it was then accomplished by passing the needle from within outward, and depressing the handle, when the point projected on the opposite side of the artery, covered with some intervening substance, which was broken through with my nail. The ligature was then laid hold of with a pair of forceps; and, on withdrawing the needle, a large stream of florid blood gushed forth, *per saltum*, from the wound. My friend Dr. Whiting, who stood near, plunged his finger into the wound and pressed upon the artery, and while he thus suppressed the bleeding, the ligature, which was supposed to be upon the subclavian, was tied. The finger being cautiously withdrawn, it was a source of the highest gratification to discover that no hæmorrhage followed. All present were relieved from a degree of anxiety painful beyond description. The pulsation, however, of the artery, as it passes between the

* Here we ascertained, by pressure on the vessel, that it did not command the pulsation of the tumour, and thence concluded that it was not the subclavian. It was then turned aside, and the proper trunk discovered.

clavicle and the first rib, was not stopped, nor was it in the aneurismal tumour. On attempting to move the first ligature, it was found fast; and, by sponging away the blood from the bottom of the wound, it became evident that this had been, in the hurry and agitation of the appalling moment, tied in place of that on the subclavian, and that the knot had included one of the ends of the latter ligature. As it was difficult to distinguish the included end from those belonging to the ligature that had been tied, by the advice of the gentlemen present, all the three ends were made fast, in succession, to the one which remained detached on the other side of the artery. The pulsation then ceased, and never afterwards returned.

It was now evident that, in pressing up the end of the needle* to clear the point of it, the coats of an anastomosing vessel, lying anterior to the subclavian, had been penetrated, and under which the first ligature was passed.

I had provided myself with an instrument to enable me to tighten the knot of the ligature which lay at so great a depth; but this was readily accomplished by my friend Dr. Whiting placing his finger between the ends of the ligature and upon the knot, while I tied it.

The edges of the wound were brought together by three stitches and adhesive plaster. The patient bore the operation, which occupied nearly an hour, with great fortitude. From this time till the 19th, but little constitutional derangement followed. It was remarkable that the pulse in the wrist of the same side, which, previous to the operation, was scarcely perceptible, and which, directly after the artery was tied, could not be felt, was, in the evening, as distinct and as large as that in the other arm. The brachial artery also could at this time be felt beating about two-thirds its length, beginning near where the profunda major is usually given off. The arm, for several days after the operation, was generally found in a state of perspiration. The heat was never lessened.

The patient was placed on a very low diet, and kept quiet in bed. He slept well during the night without an opiate, and complained of no uneasiness. In the evening of the second day, there were slight irregularity and intermission of the pulse. Twelve ounces of blood were taken from the left arm, after which the pulse improved; and the following even-

* The needle, though considerably less pointed than that used by Mr. Liston, is, I am satisfied, still too much so to be safe. One more flattened, with a thin rounded end, may be handled with greater freedom and security.

ing the bleeding was repeated with the same effect. After the eighth day, the pulse became quite regular, and varied between 90 and 100. The tumour continued gradually to lessen in size. The wound was dressed on the fourth day, and was found partly adherent, with a discharge of healthy pus from the openings through which the ligatures passed; and it continued to heal well.

Nothing of importance occurred after this time till the 19th, sixteen days after the operation. At four o'clock this morning, I was sent for to the patient, on account of hæmorrhage from the wound, which had by this time nearly healed, except where the ends of the ligatures hung out. When I arrived, he had lost about three or four ounces of blood. I took off the dressings, and found the bleeding had stopped. The ligature on the main artery remained firmly attached. Thinking the hæmorrhage might have come from one end of the jugular vein, which had been divided and tied during the operation, and from the upper end of which the ligature had not yet separated, I applied a compress of lint along that vessel. At eight o'clock, Dr. Whiting saw him with me. There had been no return of hæmorrhage. On gently pulling the ligature, however, with which the subclavian artery had been tied, a slight oozing of blood, clearly arterial, came along it. A thick compress of lint was applied, and adhesive plaster tightly stretched over it. At seven o'clock in the evening, I was again sent for on account of bleeding. When I arrived, he lay almost covered with blood. I took off the compress, and found the hæmorrhage had stopped before my arrival. On gently moving him, to take away the bloody linen, he fainted. Another graduated compress, much larger than the former, was applied. Directly after this bleeding, the aneurismal tumour was found to have considerably subsided. The hæmorrhage returned at one, and again at six the following morning; but as he had not lost more than 3ss. of blood at each of these bleedings, I did not take off the compress. There was no more bleeding till one o'clock the next morning; and it stopped of itself as before.

On the 22d, as there was considerable fœtor from the dressings, the upper part of the compress was removed and renewed. — 23d. The wound was dressed; no hæmorrhage occurred when the compress was removed; and, on pressure, a discharge of healthy pus appeared. — 24th. Dressed as yesterday. The ligature, for several days, had been twisted by means of a piece of wood put through its end, and fastened down with adhesive plaster: this morning, it lay loose in the wound. On examining the ligature, it was found that the knot, upon the subclavian artery, had given way, on account of its not having been tied double. A reference to the

account of the period of the operation when the ligature was tied will explain this circumstance. The silk was twisted to the very extremity.

After the second bleeding, considerable constitutional irritation took place. The pulse was seldom lower than 112, and usually between 120 and 130, very small and feeble; sometimes it was scarcely to be felt. A troublesome cough was also present, which was attended by a mucous expectoration, dry tongue, frequent hiccup, and a hot and dry skin. The aneurismal tumour, on the 21st, began gradually to increase in size, without pulsation; and on the 29th, it became so evident, that it was proposed to puncture it next morning. In the evening, however, a violent cough came on, which continued incessantly throughout the night. On visiting him in the morning, I found he had brought up, by coughing, six or eight ounces of bloody pus, very high coloured, and the tumour had diminished during the night about one-half; but as it evidently yet contained a considerable quantity of fluid, and as he was exhausted by incessantly coughing, it was determined to evacuate its contents by a small opening, at the most depending part. About five ounces of the same kind of matter as that which was coughed up escaped by this outlet, which greatly relieved him. A cavity could now be distinctly felt between the first and second ribs, at their sternal ends, through which the fluid had passed into the lungs; and as there was now a free communication with the lungs, the air passed freely into the sac whenever he coughed, distended it, and sometimes the air escaped by the external opening. A compress and straps of adhesive plaster were placed over the opening which formed the communication between the lungs and the sac, with a view of preventing the matter from passing into the lungs. A plug of lint was put into the outer opening, and occasionally withdrawn to let out the matter. This plan had the effect of preventing the cough for several hours together. He continued, however, to cough a good deal, and he expectorated pus, at intervals, for several days, though of a much lighter colour. A free allowance of wine and nutriment were allowed him; and he continued gradually to recover from his greatly emaciated and weakened state.

The discharge from the outer opening and through the lungs gradually lessened, and assumed a healthy appearance. At the end of three weeks, nothing was discharged from the outer opening, which was, therefore, allowed to close. The cough, after expectorating for near a week a thin glairy mucus, gradually left him.

After escaping from this dangerous situation, and when the wound had nearly healed, an erysipelatous inflammation

Mr. Bullen's Case of Ligature of the Subclavian Artery. 195

appeared on the left side of it, which was confined to the inner triangular flap; and, notwithstanding the means which were used, partial suppurations continued to form in different parts of the flap till the middle of June.

On the morning of the 17th of June, seventy-five days after the operation, there were two small openings, discharging a bloody pus, one about an inch above the other, communicating by a sinus underneath the integuments, the original wound having completely cicatrized. Supposing that there was not a free exit for the matter, the space between the openings was divided by a blunt-pointed bistoury. No matter followed; and very little bleeding took place from the edges, which had a glassy and spongy appearance. A piece of lint was inserted between the edges, and lightly covered with adhesive plaster. In the evening of this day, while stooping to pull off his stockings, a large stream of blood suddenly gushed from the wound, which he with difficulty checked by pressure with his hand. I saw him a few minutes after; the hæmorrhage had then stopped, and he very soon fainted. The wound was dressed with a thick graduated compress and long straps of adhesive plaster, as after the former bleedings. On the third day after this, the dressings were taken off; there had been no return of hæmorrhage; more healthy pus was discharged than for several weeks previously; and the erysipelatous appearance had subsided.

On the fourth day, the skin of the right side, in the situation of the aneurismal tumour, became inflamed; the integuments very tumid and tense. He had passed a very restless night, owing to pain in this situation, and to a troublesome cough, which greatly aggravated the pain, and which was attended with a mucous expectoration; his breathing became hurried, and the pulse very quick and feeble. His tongue was rather white and dry. A cold evaporating lotion was ordered to the inflamed part, with directions for leeches to be applied to it, if the pain should continue. In the evening, it took on the erysipelatous character; but the pain was quite gone. The swelling continued to subside, and after three or four days it had disappeared. The wound went on healing, and, ninety-two days after the operation, was quite well.

The posterior cervical artery, which was turned on one side during the operation by a blunt hook, is now felt greatly enlarged and tortuous, and running superficially across the cicatrix. His health is fully re-established; the hand, however, is sometimes slightly benumbed, but he has had no pain in it ever since the artery was tied. He can use both arms freely.

Lynn Regis, Norfolk, 26th July, 1843.

III.

Case of Aneurism of the Aorta, in which the Application of Cold proved very beneficial. By JOSEPH WARD, Esq.
Member of the Royal College of Surgeons, and Apothecary to the London Hospital.

THOMAS BURGON, ætatis fifty-six, gardener, first applied for relief April 9, 1822: he had been labouring under all the usual symptoms of a thoracic aneurism, and at the time of his application was found to have one of large magnitude on the right side of the cavity of the chest, rather below the clavicle; it protruded very much above the surface, and to all appearance was in a very advanced stage; his breathing was short, and he complained of excessive pain in the right arm, which increased on his allowing it to hang by his side. He was put under a palliative treatment for these symptoms during two months, during all which time the tumour remained stationary, when he went into the country.

In a short time afterwards, the tumour was observed to increase in size, and the symptoms became more urgent; a dark spot appeared in its centre, around the edges of which a very small quantity of arterial blood oozed out. Attention was paid to his bowels, and vinegar and water were ordered to be applied assiduously, with a view to keep the part constantly cold; this gave him very severe pains in the head, which were not relieved by the usual remedies, and annoyed him much. After the cold application had been continued some days, the tumour was observed to lessen, the dark central spot diminished in size, and at last a complete cicatrix formed, the tumour totally disappearing; he was still, however, troubled with pain in the chest and shortness of breathing, and the pain in his right arm continued: his situation, notwithstanding, was very bearable, compared with what it had been.

This state continued for about three months, when he became worse; the tumour was observed to increase very gradually, and all the symptoms became daily more urgent. He was treated as before, but without relief; and on 24th July, 1823, he died from external hæmorrhage, the tumour not having reached near the size it had on the former occasion.

On examination after death, nothing very particular presented itself. A large aneurism existed at the arch of the aorta, without ossific deposits; the other large vessels were quite healthy, and the coagula in the aneurismal sac were observed to be rather more firm than usual.

IV.

Case of Melanosis. Communicated, in a Letter to Dr. COPLAND, by Sir ANDREW HALLIDAY, Domestic Physician to their Royal Highnesses the Duke and Duchess of Clarence. *

[With a Plate.]

“ Hampton Court, 7th August, 1823.

“ DEAR SIR, — When I transmitted to you the case of melanosis which appeared in the REPOSITORY for June last, I stated that it had been sent to me by a young friend in Edinburgh, who had copied it from his notes taken in the Royal Infirmary, where the patient was treated. I further observed, that as the disease was little known in this country, and the case was of some interest, I thought it was worthy of being recorded in the pages of your respectable Journal. But you gave the case without printing my letter; it might therefore appear to some that I had communicated it as one which had occurred in my own practice, though, indeed, the date of Edinburgh is pretty decisive of that point.

“ I have now the honour to enclose the notes of a still more interesting case of the same disease, which, to prevent all possibility of mistake, I beg to say have been furnished by another friend from the same quarter. The patient was treated in the clinical ward of the Royal Infirmary, by Professor Alison.

“ In my friend's letter there is a remark which does not occur in his notes of the case, namely, that this patient and *John Houston*, the former case, were both inhabitants of the same *wynd* or narrow lane in Edinburgh.

“ I expect portions of the morbid structure of the patient whose case is enclosed, in which the distinctive marks of this singular disease are very apparent. These I shall also transmit to you, that you may, if you should think it of sufficient interest, give your readers a coloured drawing of the same.

“ I am, dear Sir, yours, &c.

“ To Dr. COPLAND.”

“ ANDREW HALLIDAY.”

June 3d, 1823. — Rachael Bruce, ætatis forty-two, married, complains of severe pain shooting down from the loins

* We express our acknowledgments to Sir Andrew Halliday for this, and the former case — the first, we believe, of the kind recorded in this country. Our readers will perceive that we have attended to

to the inferior extremities, and around the abdomen, and also of similar pains in the right shoulder and arm. The pains are more severe in the night-time, are sometimes increased by motion, and when long continued, are followed by incapacity of motion of the lower extremities. She has become weak and emaciated since these complaints began, and is occasionally liable to shivering, followed by flushing and profuse sweats, which increase her debility, but do not relieve her pains. She has some swelling, without distinct fluctuation of the abdomen, which she thinks is more distended at some times than at others. There is also pain over the abdomen, not severe, and slightly relieved by evacuations. She has also thirst, and her urine is scanty, high-coloured, and not coagulable by heat. The integuments of the abdomen are flaccid; and there is an irregular induration, moveable, and somewhat painful on pressure, in the hypogastric and both iliac regions. Has had ten children, the last was weaned three months ago, since which the menses have not appeared. She is also liable to paroxysms of dyspnoea, approaching in the night-time, chiefly after exposure to cold, which oblige her to sit up in bed, and which vary in duration from twenty-four to seventy-two hours, and are followed by copious expectoration. Her appetite is impaired. She complains of bad taste in her mouth; — tongue white and dry — bowels said to be regular — occasional sickness — pulse 108, small — sleep deficient.

Her complaints came on, five or six weeks ago, after exposure to cold, with shivering pain and stiffness of the loins, and of the hip and knee-joints of the left side. The pains increased in severity for a week, but have continued nearly the same since that time. The enlargement and induration of the abdomen have only been noticed within the last fortnight, and began equally on both sides. Her asthmatic paroxysms commenced five years ago, but she has been free from them for the space of three months. Has lately used purgative and diuretic medicines, and employed embrocations to her loins and thigh. — Foveatur abdomen. Habeat, horæ somni, pulveris antimonialis, gr. v. et haustum anodynum.

4th. — Vomited her medicine last night — took five grains of antimonial powder this morning, which has been retained — pains of abdomen and loins much complained of — pulse 112 — tongue white. — Habeat statim haust. ex oleo ricini.

Sir Andrew's suggestion of giving a coloured engraving of this species of morbid structure: we are not aware that we have been anticipated in this particular, even by our Parisian brethren, who have lately paid some attention to this interesting disease.

Applicentur hirudines viij. abdomini quò dolet. Habeat balneum calidum vespere, et sumat postea pulveris ipecac. et opii, gr. xij. Fricantur partes dolentes tincturâ saponis et opii.

5th. — Bowels were opened by the draught — the leeches bled well — had a better night after the bath — swelling of abdomen and tenderness of lower part continue — pulse 112. — Intermittantur hirudines. Repetatur haustus ex ol. ricini, cras mane ut heri, et contin. alia.

6th. — Had a bad night from pain of thigh — oil has operated — fæces pretty natural — abdomen rather easier — pulse 114 — tongue whitish, with thirst. — Bibat potum acidum vegetabile ad libitum. Sumat misturæ diaph. salin. ʒj. Stia quâque horâ. Rep. pulv. ipecac. et opii, horâ somni, et linimentum. Interm. alia.

7th. — A bad night from general pains, with some sweating — bowels not opened today. — Sumat statim haustum ex ol. ricini. Interm. mistura salina diaphoretica et pulv. ipecac. et opii. Rep. baln. tepidum vesp. Injiciatur, horâ somni, enema anod.

R Submur. hydrarg.

Opii, āā gr. xij.

Conservæ Rosæ, q. s.

ft. massa; divide in pilulas xij. æquales; sumat j. bis indies.

8th. — Had some sweating, after the bath, but not in the pained limbs — bowels were opened by the castor-oil — the anodyne enema not retained — had a bad night, chiefly from pain of the back — tympanitic distention rather increased. — Interm. baln. et haustus ex ol. ricini. Contin. alia ut heri.

9th. — Had a better night, with sweating — pains are easier — swelling of abdomen continues — pulse about 110 — urine not increased — anodyne enema was partly retained — bowels not opened today — mouth somewhat sore. — Interm. pil. cal. et opii. Sumat h. s. haust. cum liq. opii sedat. g^{ss}. xxx. Contin. linim. Rep. haust. ex ol. ricini c. m. Sumat pil. scilliticæ gr. x. bis die. Interm. enema anodyn.

10th. — A pretty good night, with sweating — draught has operated — fæces partly scybalous — distention of abdomen continues, but its tenderness rather diminished — pain of limbs gone — pulse 108 — urine as before. — Rep. medicam. ut heri. Sumat horâ somni pil. hydrarg. ij.

11th. — Had a bad night — shifting pains in the side continue — complains of globus — two rather scanty evacuations since yesterday — pulse 114 — skin moist — mouth still sore — abdominal distention as before. — Cont. medicam. et rep. haust. horâ somni, c. liq. op. sedat. g^{ss}. xxxv.

12th. — Mouth very sore — had a bad night from pain of the back — three pretty natural dejections from the castor-oil this morning — hypogastrium still painful on pressure — no dysuria — distention of abdomen not increased — pulse 100 — still complains of globus. — Rep. baln. calid. vesp. Interm. pil. hydr. et haust. ex ol. ricini. Cont. alia.

R Aq. Ment. ℥viij.

Tincturæ Valerianæ Ammon. ziv. M.

Sumat 3j. bis terve in die.

13th. — Had a good night, with sweating after the bath — pain much easier — the castor-oil draught, given by mistake this morning, was vomited — globus relieved — tympanitis as before. — Interm. baln. et h. ex ol. ricini. Cont. alia.

14th. — Mouth less sore — three dejections, which were pretty natural, and passed without pain — more pain of back last night — pain of abdomen, flatulence, and globus, continue — urine very scanty. — Interm. mist. c. tinct. valerianæ.

R Acetatis Potassæ, 3ss.

Aquæ Fontan. 3vij.

Spiritus Etheris Nitrosi, 3j.

Syrupi, 3ss. M.

Sumat 3j. ter in die. — Cont. alia.

15th. — Had a good night, with sweating — two rather scanty dejections today — less pain of back — distention of abdomen somewhat less — tenderness at the lower part continues — sore throat continues — some appearance of aphthæ in the fauces — pulse 108 — no increase of urine. — Contin. med.

16th. — Had a good night, with sweating — pains continue easier — two dejections this morning — a castor-oil draught was taken, but partly rejected — throat better. — Contin. medicamenta.

17th. — An indifferent night, but without much pain — bowels open, without the laxative — pulse about 100 — tongue somewhat aphthous — distention of abdomen diminished. — Contin. med. A bit of steak today.

18th. — Had a good night — rather less tenderness of abdomen — complains chiefly of globus — relished the steak — bowels open last night — tongue cleaner.

19th. — Complains still of globus, of tenderness of hypogastrium, and of some pain in the small of the back — a pretty good night, with much sweating — two pretty natural dejections — appetite a little improved. — Contin. medicam. To have a bottle of small-beer daily.

20th. — Pain of abdomen as yesterday — one pretty natural dejection this morning — pulse 198 — much sweating —

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has taken a little wine — urine not increased. — Interm. pilulæ scilliticæ.

R Decocti Cinchonæ, ℥j.

Acidi Sulphurici Dil. ʒiss. M.

Sumat ʒij. bis in die. — Contin. alia. — Hab. vini rubri, ʒiv.

21st. — Had a better night — much sweating — one rather scanty dejection — pulse 112 — distention of abdomen, with pain at the lower part, continues. *There are several small tumours, slightly painful, immediately beneath the integuments of the abdomen, which she says have appeared since her illness.* — Contin. medicamenta omnia.

22d. — Bowels not opened since yesterday — a blister, which was applied to the lower part of the abdomen, not yet removed — had a bad night — complains of confusion of head after the draught — sweating continues — urine rather increased. — Interm. haustus, h. s. Sumat statim haustum ex ol. ricini. Inj. h. s. enema anod. c. tinct. opii, ʒij.

23d. — Blister rose well — enema was not retained — five grains of opium were introduced into the rectum — had an easier night — urine considerably increased, and sometimes passed involuntarily — no pain just now — bowels not opened — has taken some more wine. — Rep. haust. ex ol. ricini c. oleo, ʒvj. Bibat infusum lini ad libitum. Rep. h. s. suppositorium ex opio, gr. v. Hab. vini rubri, ʒviij.

24th. — Pain has continued easier — has slept much, and sweated — takes a little food — declined taking the draught, but took two laxative pills, which have not operated — urine still passed involuntarily — pulse 108. — Sumat statim pil. laxantes, ij. Rep. alia ut heri. Interm. haust. ex ol. ricini.

25th. — Pain continues easier — has slept much — one rather scanty dejection — urine not passed involuntarily to-day — distention of abdomen rather diminished — pulse 120 — tongue pretty clean. — Interm. mistura cinchonæ. Cont. alia ut heri.

26th. — Had more pain of abdomen last night — three dejections this morning of pretty natural appearance and solid, since which the pain has abated — urine diminished — some sweating — much debility — pulse 126 — complains of thirst. — Contin. vinum, et suppositorium h. s. Interm. alia. To have a bottle of small-beer. App. emplastrum adhesivum sacro.

27th. — Had a worse night — pulse 120 — much complaint of debility — less distention of abdomen — more swelling and hardness at the lower part — bowels continue open — some nausea. — Sumat haust. salin. efferv. urgente nausæâ. Hab. h. s. haust. c. liq. op. sedat. gr^{ss}. xl. Rep. suppositorium. Foveatur abdomen decocto papaveris somniferi.

28th. — Had a good night, and is free from pain — pulse 120 — bowels have been opened. — Contin. med. Sumat pil. lax. ij. cras primo mane, nisi prius solutus sit alvus.

29th. — Had an easy night — no dejections since yesterday — no appetite. — Sumat pil. lax. ij. statim. Contin. alia.

30th. — An easy night, without the draught — complains of no pain — pulse as before — much debility — bowels confined. — Sumat statim pil. lax. iij. Inj. enema domesticum, et rep. si opus sit. A couple of oranges daily.

July 1st. — Had a worse night — some sickness and vomiting — no complaint of pain — one scanty dejection. — Rep. statim pil. lax. Omit the oranges. To have a double allowance of fresh milk daily.

2d. — Complains somewhat of general uneasiness, but has slept a good deal — pulse 124 — bowels opened by the pills. — Contin.

3d. — Had an easy night — complains of smarting of the sore over the sacrum — bowels not opened — tongue dry, with thirst. — Sumat pil. laxantes, iij. App. catap. lini usitatis. dorso. Contin. alia.

4th. — Bowels have been loose since last night — poultice gave uneasiness, and the adhesive plaster has been again applied — tympanitic distention quite gone — no complaint of pain — pulse quick and small — much drowsiness. — Interm. pil. lax. Contin. alia.

5th. — Is nearly in the same state — less diarrhoea in the night. — Rep. supposit. opii vesp. et haust. h. s. Contin. vinum.

6th. — Some pain of left side — bowels still rather loose — features much collapsed. — Sumat statim pil. opiatæ ij. Fricatur pars dolens tinctura saponis et opii. Rep. supposit. ex opio.

7th. — Had some vomiting of dark-coloured matter at twelve last night, and died soon after.

8th. — *Sectio Cadaveris.* The body was much emaciated, and several small dark spots and tumours, visible during life, were observed distributed over the body, chiefly on the trunk. These tumours were largest and most numerous in the mammæ — they were imbedded in the cellular substance, were encysted, and when cut into were found to contain a dark brown substance, almost black, and of a soft pulpy consistence, which could be only partially removed, by washing, from the cellular texture in which it was deposited.

Within the *abdomen*, the cellular and adipose texture connected with the *viscera* had almost disappeared. The *peritoneum* lining the *parietes* appeared of a blackish colour, and

the black matter was irregularly deposited in striæ and spots within this membrane, which had lost much of its shining and transparent appearance.

The *omentum* was similarly altered, and several globular shining tumours of a black colour were appended to it, which, when cut into, poured out a dark homogeneous fluid.

Between the folds of the *mesentery*, and beneath the serous membrane of the intestines, there were numerous black spots and small tumours. There was some unusual vascularity, and many small vessels containing red blood could be observed upon the portion of membranes which formed the cysts of the black tubercles.

The *ovaria* were very considerably enlarged, and were seated immediately in front of the uterus, occupying also the iliac regions. Their external surface had a shining dark and lobulated appearance, with numerous ramifications of vessels on their peritoneal covering, beneath which black matter was irregularly deposited in spots, giving a mottled appearance to the whole. When cut into, their substance was uniformly black. The cellular tissue still retained its consistence, and vessels containing red coagulated blood could be traced through it. Several distinct cysts or cavities were formed in their substance, which poured out a black liquid when opened.

The *kidneys*, *liver*, *spleen*, and the *mucous coats* of the *stomach* and *intestines*, appeared altogether free from black matter, although it was deposited in the cellular membrane connected with these organs.

On removing the sternum and skull-cap, it was observed that the whole texture of the sternum and the anterior portion of the ribs, and great part of the parietal and occipital bones, were blackened, more brittle, and of a softer consistence than natural, but without enlargement or evident alteration, or thickening of the periosteum.

Beneath the *pericranium*, black matter was deposited in the form of encysted tumours; but when these were raised from the bone, the black matter was found to enter by fine projections into foramina in the bone, without the intervention of any cyst. The *pericranium* was easily separable from the subjacent bands, but was otherwise natural. The whole inner table of the skull, when removed from the *dura mater*, was of a darker hue than natural; and, in some places where the black matter appeared to proceed from the bone to the subjacent membrane, the latter had patches corresponding to those on the inner table, and which could be partially removed by scraping: at these points the bone was evidently darker and more perforated than in other parts. The substance of the brain was natural; but several minute studs of dark matter

were deposited in the course of the ramifications of the small vessels on the membranes covering the base of the brain and of the choroid plexus. A large quantity of serum was effused into the ventricles and under the arachnoid coat, which was considerably elevated by it.

Within the *thorax*, a number of small black tubercles, of similar structure with those in the integuments, were situated within the pleura costalis; and others, of a larger size, were attached to the surface of the lungs: all of them appeared enveloped in a slender cyst.

The substance of the *lungs* was dark, and some minute black tubercles were imbedded in it. Similar spots were noticed within the pericardial covering of the heart, which contained some coagulated blood in its cavities, and was softer than natural.

Explanation of the Plate.

Fig. 1st. — The small tumours imbedded in the cellular texture throughout the body. (See p. 202.)

Fig. 2d. — A transverse portion of the sternum, sawn on both sides, in order to show the black colour of the bone, and with the periosteum, which is also considerably blackened, attached to both its anterior and posterior aspects. At one corner of this portion of the sternum the cartilaginous attachment of one of the ribs may be observed of nearly its natural colour. (See p. 203.)

Fig. 3d. — A small portion, we believe, of one of the thicker bones of the cranium, showing the cancelli between the tables.

V.

Case of extensive Abscess of the Brain, which partly discharged itself externally for some time previous to the death of the Patient. By WILLIAM PRETTY, Esq. Member of the Royal College of Surgeons, London.

FRANCES ROBERTS, twelve years of age, was seized with convulsions in the night of the 6th of July, when her parents called me to attend her. I found her in a strong epileptic convulsion; and as I could then obtain but little knowledge of her previous symptoms of illness, the girl appearing otherwise healthy, and the period of puberty having seemingly arrived, from the enlarged state of the breasts, I felt disposed to consider the affection as arising from sympathy with the change which was taking place in the organs of generation.

The bowels having been freely relieved the day before, I contented myself by abstracting eight or ten ounces of blood from the arm, and desired that she might be taken such care

Fig. 1.



Fig. 2.



Fig. 3.



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For the London Medical Repository for Sept. 1823. - N° 117. - P. 204.

Fig. 1.



Fig 2.



Fig. 3



del.

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of as should prevent her from bruising herself. I saw her again in a few hours. The bleeding had afforded no relief to the convulsive paroxysm, for it continued three hours and a half. The blood drawn was buffy, and the crassamentum firmly contracted.

Upon seeing my patient the following day, she complained of much pain in the head, with fever, and a pulse of 120. She was now bled locally with leeches; and I ordered some saline medicine, with digitalis, and directed her to continue the use of a purgative mixture which her brother, a chemist, had prescribed for her a week before.

I was now informed that she had suffered great pain from the formation of an abscess in the left eyelid. Inflammation had commenced a fortnight before the fit. Leeches and poultices had been freely applied, after which the abscess had burst. There had been a free discharge of pus, though it was now very much diminished in quantity. The integuments were recovering their usual healthy appearance; and as no particular complaint was now made of this part, it was simply kept clean and poulticed. In a few days it healed over. About this time she was so free from suffering, although much reduced in strength from the plan which had been adopted, that I left her for several days to recruit. Calling afterwards, I was a little disappointed at finding her ill in bed, with a return of fever, a slow, irregular, and intermitting pulse, some disposition to delirium and insensibility, and with another attack of inflammation in the eyelid. She was blistered upon the back of the neck; had the head kept cool by the constant application of cold vinegar and water; a few more leeches were applied; and the purgative medicine again resorted to.

The symptoms, however, continued to increase: an abscess formed again in the eyelid; it burst, and discharged a little every day. Delirium, tinnitus aurium, and restlessness, now supervened, and were followed by stupor, insensibility, and hemiplegia of the right side. The loss of motion and sensation of that side was most complete; but the mouth, instead of being drawn on one side, as is usual in paralytic seizures, was so firmly closed as to allow the introduction of the point of a spoon only between the teeth. The iris was perfectly inactive, and the sight of the right eye quite lost. There came on a very frequent tossing about of the left arm, and a drawing up and down of the left leg. At times a gleam of consciousness appeared, as she swallowed some milk, when roused to it by the solicitation of her friends, and resisted an attempt to cut off her hair, but she was unable to speak. The breathing was quick, and sometimes stertorous. The

state of stupor and paralysis continued for seven days, when she died, exactly three weeks after the epileptic convulsion, and five from the commencement of inflammation in the eyelid.

Post-mortem Examination.—The upper part of the skull was easily removed. The cerebral veins were very distinctly seen through the dura mater, and when the latter was removed, they appeared in a very turgid state. Upon slicing the brain, blood oozed freely from the cut surfaces; and when cut nearly level with the corpus callosum, the right lateral ventricle was opened, and was found as full of water as it was possible to contain, in a fully ossified cranium. Plunging a knife in the situation of the opposite ventricle, some ill-conditioned pus escaped at the opening, which being enlarged in the direction of the left orbit, the walls of an abscess of very considerable extent were exposed, containing not less than one ounce of pus, some of which presented a dark hue, and some a healthy appearance: a little extravasated blood was also discoverable. The whole of the left hemisphere of the cerebrum was diseased: it was preternaturally soft, and of a dirty yellow hue when compared with the right, which possessed the natural appearance. We could find no distinct left lateral ventricle, so completely were its parietes broken down by the suppuration. The abscess took a pretty straight course through the posterior, middle, and anterior lobes, till it reached the dura mater, in contact with that portion of the os frontis which is a little above a line drawn horizontally with the summit of the crista galli, and about half an inch from it on the left side; here was a perforation in that membrane, large enough to admit a crow-quill. A circular portion of the bone in contact with it was carious, the diameter of which was half an inch. The caries had penetrated both tables of bone, and very small perforations were discovered in it, externally above the root of the nose, inclining towards the internal angle of the orbit; and thence the abscess must have made its way, under the integuments of the forehead, to the eyelid, where it discharged itself by ulcerative inflammation. The dura mater, at its edges, surrounding the perforation in it, was but very loosely attached to the inferior part of the os frontis, yet no matter had escaped between the membrane and bone. A thin layer of pus was seen upon the under surface of each lobe of the cerebellum, and when removed left it a permanent opaque spot in the arachnoid membrane; there was also serous effusion between this membrane and the pia mater, upon the superior surface of the brain, and likewise a good deal in the theca vertebrarum. — This examination was made sixteen hours after death.

Remarks. — The mother of this girl informs me, that my patient had experienced two attacks of chorea, each of about five months' duration; one occurred in 1819, and the other in 1820; and that she was well only six months between them. For their cure she attended the Bloomsbury Dispensary; and from the recommendatory letter, I perceive that tonic medicines were prescribed, and that she was discharged as cured of the last attack in October. She afterwards very often complained of pain in the head, but looking well, little notice was taken of it; and even up to the time of the inflammation commencing in the eyelid, it was thought by the girl and her friends that she had inflicted on herself some injury during her sleep. I therefore infer, that her disease assumed an acute form only a short time before the convulsion, but that, in all probability, a chronic state of it had been going on for several years preceding her death. During the convulsion, it was remarked that the muscular contractions were much more powerful in the right arm and leg than in the left; the opposite side, it is well recollected, was more particularly affected during the continuance of chorea. Dr. J. Johnson, Mr. Bagster, and Mr. Terry, assisted me in this dissection.

Mabledon Place, 4th August, 1823.

VI.

Case of Miliary Fever. By W. C. DENDY, Esq. Surgeon to the Royal Universal Dispensary for Children.

EVERY derangement which occurs to females in the puerperal condition, added to those peculiar changes which that state must of necessity be in some degree attended by, becomes, by the puerperal modification, additionally dangerous. The supervention of considerable pyrexia, combined with a diffused eruption of minute red spots, is not a very unusual occurrence during the first week of parturition, arising from exposure, injudicious administration of stimulants, over-heated apartments, suppressed secretion, or from some other cause—an affection which has been called the rash. The disease, however, which may be considered the true miliary fever, and which is marked by considerable anxiety, fever of a high type, and more or less local disturbance, accompanied by the eruption of innumerable white, vesicular spots, is one, I apprehend, of less frequent occurrence. The instances of this description that have come under my notice have been few; the last was a case of such

which was successful in this instance; while the other doctrine favours that which was employed at the commencement of the disease, and which was found to add to its severity. — I have been induced to publish this case, as, in my opinion, illustrations of serious disorders which occur frequently are more calculated to be useful, than notices of those that are seldom met with in practice.

Great Eastcheap, 2d August, 1833.

VII.

Case of Scirrhus Thickening and Stricture of the Cardiac Orifice of the Stomach. By A. R.

THE following case is of too common a description to be of any great importance. The records, however, of cases, although familiar ones, by which a certain assemblage of symptoms is shown to be connected with a certain state of organic disease, are not altogether without their use: by a comparison of such histories, diagnosis is rendered more precise; and we are enabled to act upon our opinions, as well as to express them, with the greater confidence.

A gentleman, between seventy and eighty years of age, for many years felt an obscure, deep-seated sense of uneasiness below the sternum; it gave him but little trouble, and his health did not suffer from it. About five months before his death he had, at first, occasional vomiting after his meals: this symptom gradually became regular; and for perhaps the last two months of his life, every thing he swallowed was rejected, either wholly or in part, sometimes immediately, sometimes, though rarely, after an interval of one or two hours. During this period, there was no remarkable disturbance of the circulation. He felt a sense of obstruction to the passage even of fluids, which he described as being situated below the sternum: the food which was swallowed was rejected by an easy effort, scarcely to be called vomiting; its appearance was but little changed, and it was never mixed with food which had undergone a partial digestion. His bowels were kept open, with some difficulty, by an habitual aperient: he refused to employ any other measures; and my attendance upon him, except towards the termination of the case, was only occasional, and at very distant intervals. I was pressed very hard for my opinion of the nature of the disease; and was not permitted to save myself by saying, generally, that it was organic. It was inquired, in what did this organic disease consist? I said in a scirrhus thickening of the cardiac or upper orifice of the stomach: and afterwards

repented having committed myself by specifying a precise state of disease, upon what will appear to those conversant with the general uncertainty of diagnosis but slender premises. During the last week of this gentleman's life, there was great difficulty in procuring evacuations from the bowels, which were scanty and black. The croton-oil was given in doses of one drop every three hours, with a greater degree of success than had attended any other measures. At the termination of this case the subject was greatly emaciated, his strength exhausted; and he died, apparently, from defective nutrition.

On examination after death, the cardiac portion of the stomach was found of cartilaginous hardness, and thickened into a large bulb; the passage through it, for the space of an inch, was reduced to the size of a crow-quill: on slitting open this portion, pus was found on the internal surface, some superficial ulceration, and one deep circumscribed ulcer. There was no very remarkable dilatation of the œsophagus above the obstruction. The gall-bladder contained two large calculi, one consisting of numerous small concretions cohering together weakly; the other was firm, white, and its surface covered with minute crystals. The liver appeared less in size, its colour lighter, and its firmness less than natural. This gentleman's habits had been remarkably temperate until he began to suffer the symptoms of an established disease, when, for the purpose of obtaining temporary relief, he drank wine freely, and undiluted brandy; contrary, of course, to medical direction, as well as to the wishes of his friends.

It will be remarked in this case, that the principal diagnostic signs were—1st, the sense of obstruction at the bottom of the gullet, or commencement of the stomach; 2d, the uniform rejection of food; 3d, the duration of the symptoms; 4th, the return of food *unmixed* with the usual contents of the stomach. The two first circumstances indicated that the disease consisted of obstruction to the passage of food; the third, in connexion with his advanced age, indicated that this obstruction was organic; and the fourth, in connexion with the first, fixed its seat at or near the cardiac orifice of the stomach.*

July 31st, 1823.

* The Editors inform their readers that the eminent writer of the above case is known to them, and that its authenticity may be implicitly relied on.

VIII.

Cases of Perforation of the Stomach, &c. occasioned by the protracted Use of the Corrosive Preparations of Mercury, and of Spirituous Liquors. By U. COSTE, * M.D. of the Faculty of Paris.

IN December, 1821, a soldier of the twenty-second regiment died on the twelfth day of his treatment, in the hospital at Dunkirk, for sub-acute inflammation of the lungs, accompanied with thirst, heat of skin, and some symptoms of gastritis. The gastric symptoms were, however, unattended with acute pain, nor was the pain increased on pressure. The pulse was quick; the patient complained much of thirst; and the tongue was red only at its apex. The stomach retained liquids; and neither vomiting nor nausea were present. He could sit up until the seventh day of his treatment in the hospital.—Leeches were applied on the first day to the epigastric region, and the treatment throughout his illness was antiphlogistic. This method of cure had no influence on the state of the disease.

Upon inspection of the body, in the presence of the medical officers of the hospital, considerable sanguineous congestion was remarked in the lungs; commencing hepatization was noticed in a portion of the right lung; and, in the left, a few tubercles were found in a state of suppuration.

The stomach presented, at its anterior part, and near the middle of the small curvature, an oblong opening, about the size of a three franc piece, through which a portion of the liquids taken by the patient had escaped. A large and deep erosion, perforated at its centre to the extent of half a line in diameter, existed near the pylorus. The stomach, through the rest of its internal surface, possessed marks of a chronic inflammation. No other perforations were observed in the rest of the digestive canal, but a number of spots of a dull red colour were situated in the internal surface of the small intestines. The omentum and peritoneum presented appearances of a recent inflammation, which was more intense than was indicated by symptoms during the life of the patient.

The state of this individual was nearly the same on the day of his death, as it was on the day of his entrance into the hospital. He complained only of general illness, and of obtuse pains in his chest and abdomen, chiefly in the former.

* Communicated by the author.

He preserved his intellectual faculties, and up to the day of his death referred his disease principally to his chest.

Case 2d.—In February, 1822, a soldier in the same regiment as the former case occurred in, died on the eighth day after his entrance into the same hospital. He complained of violent pain at the lower part of his throat. His voice was not sensibly affected. I dreaded the presence of a foreign body in the œsophagus, but he assured me that such was not the case. Anxiety, pain, and difficulty of deglutition, with dyspnœa, continued to increase, notwithstanding the local bleedings, and the internal and external emollients which were had recourse to. The pulse was small and contracted.

Upon opening the body, we found the œsophagus eroded, both anteriorly and posteriorly, through the whole of its lower third. Its lateral parts appeared like ligamentous bands. The stomach was almost entirely deprived of its mucous surface, and near its middle it had two perforations in its tunics; one was as large as a half-crown piece, the other was very small. Their margins were thin, and presented no particular character. The right lung was filled with tubercles in different stages of softening. The œsophagus and the stomach in this and the former cases, are preserved.

Upon inquiry into the history of both these individuals, before their reception into the hospital, it was ascertained that the disorganization was the effect of an improper and prolonged use of the muriate of mercury in small doses, with which they had often treated themselves in order to avoid entering the hospital; and of the no less hurtful abuse of Hollands, taken with a view to excite the stomach, and repeated, both as regarded quantity and frequency, according as they found the pain and difficulty of digestion to increase.

IX.

An Inquiry into certain Opinions which exist relative to the Procreative Powers of Women who are Twins, the Socius in Utero, or Co-twin, being a Male. By J. J. CRIBB, Esq. Cambridge, Member of the Royal College of Surgeons, London.

“GENERAL conclusions,” says Locke, “drawn from particular facts, are the jewels of knowledge, comprehending great store in a little room.” Whenever, therefore, in our researches after knowledge, we are enabled, by careful and correct observation, to detect an established error, or to develope an additional fact, we deposit a jewel in the cabinet of science. But the value of our discoveries must be deter-

mined by their tendency to promote the welfare and happiness of mankind, rather than by any extrinsic merit they may derive from the difficulty of their investigation, or the skill and talent exercised in their development. As, then, the inquiry here proposed affects the interests of a considerable class of persons, it will not be regarded as altogether unimportant.

My attention was first directed to the subject by some remarks contained in a paper written by Sir Everard Home, and published in the *Philosophical Transactions* for 1799, entitled, "An Account of the Dissection of a Hermaphrodite Dog," &c. in which paper Sir E. suggests some ingenious hypotheses on the formation of the generative organs of the foetus in utero, and takes notice of the following phenomenon which is common among neat cattle.

When a cow brings forth twin calves, one a male and the other apparently a female, the former always grows up to be a perfect bull, but the latter appears destitute of all sexual functions and propensities; it never propagates, and is commonly called a freemartin. Near the end of Sir E. Home's paper is the following paragraph:—"It may also account for twins being most commonly of the same sex; and when they are of different sexes, it leads us to inquire whether the female, when grown up, has not less of the true female character than other women, and is incapable of having children? It is curious, and in some measure to the purpose, that in some countries nurses and midwives have a prejudice that such twins seldom breed."

From these remarks, together with the popular prejudice alluded to, and which certainly more or less prevails, it appears that some doubt does actually exist as to the procreative powers of this description of females. As such twin cases are by no means uncommon, it is obviously desirable to remove this question from the obscurity of a vague and remote analogy, and to place it in the clear light of fact and experience.

With this view, I was naturally induced to apply for information to Sir Everard Home; feeling assured that a gentleman so ardently interested in promoting the advancement of natural science as the learned Baronet, would not have ventured a suggestion of so much practical importance without some strong reasons for believing it at least probable. In his reply, however, to a letter which I took the liberty of addressing to him, Sir E. merely states, that the subject had been long out of his mind, and that he had not been able to ascertain any facts respecting it. Disappointed, therefore, in not receiving the instruction I had hoped for from this

quarter, I undertook to make inquiries respecting this description of females who were married, and the following is the information I have acquired:—

1. The widow Gillam, now living in the almshouses in Jesus Lane, Cambridge, informed me, that she had twins, a boy and girl, about forty-seven years ago; both are now living, and have families: the daughter, who is now married, and lives at Somers' Town, has had thirteen children. I have procured the baptismal register of these twins from the church of St. Edward, Cambridge, which accords with Mrs. G.'s account.

2. Mrs. Hall, of Chesterton, has had four children. I have obtained her baptismal register, also, from the parish of Cherry Hinton, with that of her brother, Richard Layton: they are registered as twins.

3. Mrs. S. M. of H. in Essex, has had ten children, and is still young enough to have many more.

4. Mrs. G. bedmaker to Emmanuel College, has had two children; one son living, and grown up.

5. Mrs. Pike, whose husband is employed in the University printing-office, has had two children.

6. Mrs. Hardy, a poor woman living in Cambridge Place, is a twin of this kind, and has had several children.

7. Mrs. L. wife of a plasterer in Cambridge, has been married several years, but has not yet had any children; she is, however, not more than thirty years of age.

These are all the instances I have ascertained of women, born under the circumstances in question, having been married; and six out of the seven have had children.

Of the truth of the above statements no reasonable doubt can be entertained; most of the individuals mentioned I have seen and conversed with on the subject. They could have no motive for deception; and the baptismal register, together with the other concomitant evidence, as the testimony of their neighbours and acquaintance, tend to corroborate the general correctness of the accounts.

The notion of the sterility of females of this kind seems to have originated in the peculiar sexual characters of the freemartin; which it was inferred analogically might belong also to the human subject, when born under similar circumstances.

A little more attentive observation, however, would have discovered that this analogy will not bear the slightest examination; for when the external characters and the anatomical conformation of the freemartin and those of the human female, are compared, it ceases altogether. For, in

external appearance, the freemartin differs very considerably from the perfectly formed cow; the head and neck, in particular, bear a striking resemblance to those of the bull.

The anatomy of the freemartin is sufficiently explained for the present purpose by the following paragraph, which is extracted from the same paper by Sir E. Home:—"From Mr. Hunter's observations we learn, that in all the instances of the freemartin which he examined, none had the complete organs of the male and female, but partly the one and partly the other, forming a mixture of both; and what is deserving of notice, the ovaria and testicles in all of them were too imperfect to perform their functions." The fact is, that the freemartin is a kind of hermaphrodite, but without any complete set of organs of either sex.

The human female, on the other hand, so far as my observations have extended, has nothing peculiar in her external appearance; and as so large a portion of those that are married have children, there could, of course, be no essential imperfection in the structure of their genital organs.

Both experience and analogy, then, tend to establish the fact, that women who are twins with male partners in birth are as capable of having children as other women; and consequently, that the popular prejudice to the contrary, together with the doubts and surmises of the learned Baronet, are entirely without foundation. May we not, therefore, safely conclude, that if, in such females, the catamenia and other feminine characters are natural, the circumstance of geminous birth does not at all affect the probability of their breeding?

From the foregoing statement, it would appear that Sir Everard Home has here thrown out suggestions, resting merely on a popular prejudice, and an extremely remote and limited analogy; suggestions calculated to excite painful suspicion and anxiety in the minds of a considerable number of individuals, and which that degree of investigation the subject deserves, and that might so easily have been accomplished, would have shown to be utterly destitute of foundation.

Cambridge, July 16th, 1823.

X.

Case of Amaurosis produced by Enlargement of the Pituitary Gland. By JOSEPH WARD, Esq. Member of the Royal College of Surgeons, and Apothecary to the London Hospital.

JOHN AUSTIN, baker, a strong muscular man of temperate habits, aged thirty-eight, for three years past has been afflicted with dimness of vision, accompanied, at intervals, with severe pains in the anterior part of the head, and with a sense of burning and fulness in the orbits, which was at times so distressing as to cause him to apply for advice. He had leeches, blisters, and such medicines as were deemed most proper, without receiving benefit; on the contrary, the application of leeches appeared to increase rather than diminish his sufferings. Notwithstanding this, his strength and general health continued very good, being up during the greater part of the night, and frequently carrying very heavy loads during the day. The digestive organs had been, for the most part, regular in their functions, excepting at slight intervals, and then only from such causes as might be considered wholly independent of any existing local affection.

Sunday, May 25, 1823, he again applied for advice; and complained that, during the last five or six weeks, the dimness of vision had considerably increased; that the pains had been much more severe; that he had felt a strong inclination to sleep, so much so that if, during the day, he sat down for a few minutes to refresh himself, he fell asleep, being unable to prevent it, and would continue so until disturbed; and that for the last two or three days he had been completely blind with the right eye, and this morning found himself, for the first time, totally blind with both: for the last week or ten days he had been able to distinguish objects, but upon going to bed last evening, the only object he could discern was the candle, and that not distinctly. On examining the eyes, no very apparent disease manifested itself; the pupils did not contract on the application of a strong light; they appeared rather small, but perfectly clear; he complained of some loss of appetite which had existed for a few days only; pulse 96, and small; natural secretions as usual. Supposing that some of the more prominent symptoms depended on disordered state of the stomach, he was ordered an emetic, and after its operation, five grains of calomel, to be succeeded on the following morning by an opening draught.

Monday, on being seen at two o'clock, it was found that

the medicines had operated very well, having produced several bilious motions; headach not so considerable, and in a small degree had recovered his sight in the left eye; he could see the window, and on placing the hand before his eye, could distinguish something, although unable to tell what it was. The whole of the above medicines were again ordered to be repeated.

Tuesday, he complained of being much weaker, and, in consequence, kept his bed, which he had not previously done; headach better; vision as yesterday; slept constantly, and snored very loudly. Six leeches were ordered to the temples, the calomel and opening medicine to be continued, and a blister to be applied to the nape of the neck.

Wednesday, an eminent oculist being called in, he considered the illness to arise from congestion in the cerebral vessels, and ordered twenty ounces of blood to be taken from the arm, with a saline draught every four hours; and concluding that it was a medical case, he declined his further attendance; the patient fainted when he was bled.

Thursday, he was more inclined to sleep; was roused with much difficulty, but when awake, spoke very sensibly, and answered the various questions proposed to him; since the bleeding the pulse was weaker, and 120; debility greater. This morning, a Physician being called in, he was ordered to lose twenty-four ounces of blood from the arm, the saline medicine to be continued, four grains of calomel to be taken at bed-time, and an opening draught on the following morning.

Friday, at half-past twelve, he died; and on the following day, when he was examined, the following appearances presented themselves:—The membranes of the brain were quite healthy; some degree of fulness of the vessels existed, but it was only very trifling; the fluid in the ventricles was about the natural quantity; on raising the anterior lobes of the brain, a tumour was found arising from the situation of the pituitary gland, and pressing upon the optic nerves; it was of considerable size, forming a nidus in the anterior lobes; the optic nerves were very beautifully expanded upon it; the right diverging nerve was rather more expanded than the left; the olfactory nerves were likewise very much pressed upon.

London Hospital, 7th August, 1823.

XI.

A few Observations upon the Nature of Fractures of the Long Bones in general, and upon the Nature and Treatment of simple Fractures of the Humerus in particular; accompanied with a Description of a New Apparatus, illustrated by Cases.
By JOSEPH AMESBURY, Esq. Member of the Royal College of Surgeons, &c.

IN the sketch, which I have ventured to publish, of the treatment of simple fractures of the lower extremity, I have enumerated some of the evils which attend the common modes of treating fractures of the leg and thigh; and have endeavoured to point out some general principles of treatment, which, as far as I know, are altogether new.

Since I published this imperfect sketch, I have not seen the least occasion to swerve from any one of the principles which I there endeavoured to establish. Indeed, I may say, that every case, which has since fallen under my observation, has served to impress the importance of those principles more strongly upon my mind; and, although much has been written upon the treatment of fractures, by men no less distinguished for their natural talents than for their surgical acquirements, additional experience has convinced me, that much still remains to be accomplished. Under this consideration, I again wish to draw the attention of my brethren to the further investigation of this important subject.

In the various conversations which I have had with Surgeons upon the nature, the degree of importance, and upon the treatment of fractures, I have often been forcibly struck with the different, and even opposite opinions which they seem to entertain. How shall we account for such disparity of opinion in cases where the nature of the injury is clear, and where the effects of remedies allow of demonstration? Thinking it may depend, in part, upon differences in the nature of the accident, which have not been sufficiently attended to, I shall make, first, some observations which may be regarded as common to fractures of the long bones in general; and shall then pass on to the consideration of simple fractures of the humerus.

Fractures of the long bones may be either transverse, oblique, or comminuted; and they may be considered according to the degree of injury done to the bone, and according to the degree of injury done to the soft parts; I shall therefore view them as consisting of fractures of the bone

merely, or of fractures attended with much laceration of the surrounding textures.

Among the injuries which are confined to fracture of the bone merely, I believe one variety consists in a partial division or crack of the bone, which, for the sake of perspicuity, may be termed an incomplete fracture. I have been led to form this opinion from various experiments upon recent bones while covered by the soft parts. Upon examining these bones in a denuded state, I have found, that a fracture may extend in a transverse or oblique direction through a greater or less number of the fibres of a bone without passing completely through it; and that if a fracture of this description is attended with displacement, the displacement consists in a bent state of the bone, with a portion of the edge of one or more of the fractured surfaces projecting at the salient angle formed at the fractured part.

I have been led to suspect the existence of such a fracture in several patients, in consequence of my inability to produce motion in the injured part in more than one direction; from my being unable to produce this motion in any other way than by attempts to bend the bone; from the simultaneous movements of the upper and lower portions when the lower part was rolled; from the power which the patient experienced in the limb; and from the rapidity with which a perfect consolidation of the fracture was effected. I have not, however, yet had an opportunity of examining the limb of any patient who may have died with the existence of such symptoms as I have mentioned: but even in the absence of this proof, I think, the facility with which this kind of fracture may be produced in recently dead bones, is sufficient to warrant the conclusion that such fractures do occasionally occur in the living.*

I can readily suppose the application of a force which would be likely to produce a fracture of this description. A person, while standing in the erect position, may receive a blow upon the back of the leg; but the force acting upon the limb may be only sufficiently powerful to break through a portion of the diameter of the bone, which would give way first at its anterior part. The same kind of fracture might perhaps be sometimes occasioned by the passage of a heavy body over the limb as it lies upon the ground. If the fracture

* Since I made these observations, I have discovered that Mr. Colles mentions that he has seen and examined fractures in the neck of the thigh-bone, which he believed to be of this description; but as some disease existed in the part, perhaps we are not justified in considering these cases alone sufficient to substantiate the fact.

should extend nearly through the tibia, it would become evident to the Surgeon in attempting to bend the bone, though he would not be able to produce any rotatory motion in the seat of fracture. Such a case would require but little surgical assistance for its cure.

A second variety consists in a complete division of the bone, unaccompanied by any material laceration of the periosteum. This variety, which I believe is very common, may be called a complete fracture. It may be accompanied with slight displacement in the angular or in the transverse direction; and if the fracture be oblique, it may be accompanied with slight riding of the fragments. Oblique fractures of this description overlap very little at first; but after the expiration of a few days, under common treatment, they sometimes ride considerably. The increased displacement here alluded to, I presume, takes place as soon as the projecting portions of the fractured ends have made their way through the opposing periosteum and other textures, against which they are forced by the constant action of the muscles. Fractures belonging to this variety are, very generally, easily discovered. The fractured surfaces, however, occasionally become so locked together, that, in consequence of the simultaneous movements of the upper and lower portions, a nice examination is required in order to ascertain the exact nature of the injury.

Again; a bone may be comminuted without any considerable laceration of the periosteum. Should the comminution extend entirely through the bone, the fracture may allow of being as readily displaced as in fractures without comminution, when the periosteum is much torn, and may require as much attention during the period necessary for its cure.

Besides the above varieties, other fractures occur with great laceration of the soft parts, produced by the broken ends of the bone. The laceration which accompanies this variety of fracture is produced by the forcible separation of the fragments. It may take place at the moment of the injury, by a continuation of the force longer than is necessary to break the bone; or it may be produced after the accident, by the incautious movements of the patient. I do not mean to include under the head of laceration the contusion of the muscles, nerves, &c. arising from the blow or other force which may have occasioned the fracture, for this is common to fractures and other injuries; but I wish to confine it to the injury done to the periosteum and other textures, in consequence of the displacement of the broken portions of the bone.

These fractures are usually so exceedingly evident, that the

least motion of the limb informs the Surgeon of the nature of the injury. They produce much pain to the patient, and require a great share of the Surgeon's attention during the cure.

I might, with great propriety, consider compound fractures as belonging to the last variety, as the difference in these cases consists only in the degree of laceration of the soft parts. The injury done to the bone in compound fractures does not differ from the injury which is observed in simple fractures. The wound, however, which forms a communication between the bone at the seat of injury and the external air, places these cases under somewhat different circumstances; and, as the treatment differs in some respects, I shall hereafter venture to speak of them as a distinct variety; and I hope I shall be able to show that these formidable injuries are now robbed of many of their terrors.

Either of the above varieties of fracture may extend into a joint. This circumstance modifies the fracture sufficiently to authorize me to consider fractures extending into joints as a distinct variety; because they are often attended with high inflammation of the joint; and frequently, unless well attended to, anchylosis is the consequence.

I have thought it right, on the present occasion, to make these few general remarks upon the nature of fractures of the long bones, in order that the observations, which I am about to offer respecting the nature and treatment of fractures of the humerus, may not be misconstrued.

Fractures of the humerus may take place at any part. When they occur through the neck of the bone, it is sometimes difficult to ascertain the precise nature of the injury. The fracture sometimes extends through the bone at the part where it gives attachment to the capsular ligament. In these cases the ligament is occasionally so much torn as to allow of the escape of the head of the bone from the glenoid cavity of the scapula.

Through the politeness of Mr. Travers, I witnessed, a short time ago, an inspection of the shoulder of a man who had the neck of the humerus fractured by a fall; and the parts presented the following appearances:—The head of the bone was broken off at that part which in anatomical language is called the neck, forced from its natural situation, and was found lying in the axilla. Both tubercles were broken from the shaft of the bone, and were drawn in opposite directions. The shaft of the bone was drawn up by the action of the muscles, so that its upper end came in contact with the acromion scapulæ. Though two months had elapsed from the time of the accident, there was not the least appearance

of an attempt at restoration. The man died from a rupture of the heart, and the preparation of the shoulder is now in the possession of Mr. Travers.

This man was a patient in St. Thomas's Hospital, where I had an opportunity of seeing him frequently during life, and of observing the symptoms of his accident, which were these: — The least attempt to raise the arm even passively gave him great pain. The upper end of the shaft of the bone occupying the natural situation of the head prevented the deltoid muscle from falling in, so as to present the usual appearances of fracture of the neck when accompanied with much laceration of the soft parts. This part of the bone could be distinctly felt through the muscles, moving when the arm was rotated, and giving the same kind of sensation to the fingers as when the head of the bone is made to roll under them. When the bone was forced up against the acromion, and, at the same time, rotated, the motion gave great pain, but was not accompanied by crepitus. When the bone was drawn down gently, and then rotated, a crepitus was discovered, which sometimes gave that kind of sensation to the fingers which we should expect to experience by rotating the head of the bone in a bed of rough pebbles. A preternatural fulness was felt in the axilla, which gave the sensation of crepitus when pressed towards the humerus, at the time this bone was rotated. Considerable tension continued round the joint to the period of his dissolution.

The cases of this kind that have fallen under my observation have occurred in old people.

Fractures often occur immediately below the tubercles. These, when complete, are usually easily discovered. When the fragments are brought in a line and the head of the bone fixed, the lower portion should be gently raised, so as to bring the ends in contact, and then by rotating the lower fragment, crepitus may be felt.

I have seen these cases in the young, the old, and in the middle-aged.

But the most common situation of fracture of the humerus is through the middle of the bone. When the upper portion is fixed, crepitus may be felt in the same way as in fractures through the bone just below the tubercles. A joint-like motion may be perceived by moving the lower portion in different directions.

Fractures through the middle of the bone are common at all ages.

Sometimes fractures happen immediately above the condyles. The appearances in these cases are the same as those of dislocation of the ulna and radius backward, but often

much less strongly marked. Extension removes the appearances of dislocation, but these appearances return as soon as the extension is discontinued. Usually a crepitus may be felt when the fore-arm is moved so as to produce a rotatory motion between the upper and lower portions of the fracture.

This accident happens at all periods of life; the state of the bone, however, renders children much more liable to it than persons more advanced in age.

Fractures frequently take place through the inner condyle. The fracture usually extends in an oblique direction from the trochlea of the os humeri to just above the inner condyle. The symptoms of this accident are thus described by Sir Astley Cooper:—"The ulna projects backward from having lost its support. If the fore-arm be extended, the hand becomes twisted inward towards the side; but upon flexion these appearances are removed." These symptoms, with the crepitus which might be felt upon "bending and extending the arm," are diagnostic of this injury.

Fractures of the outer condyle occasionally occur. The fracture usually extends from the trochlea obliquely outward to just above the outer condyle. Sometimes a small portion of the condyle only is broken off. In these cases crepitus may be felt by moving the fore-arm upon the humerus; or by moving the condyle while the body of the humerus remains fixed.

In taking a general survey of the diagnostic marks of fractures of the humerus, as they occur in different situations, I have confined myself to the enumeration of such as may be considered pathognomonic symptoms.

There are other symptoms usually laid down, in speaking of fractures of this bone, such as tension and pain in the part, and want of power in the limb; but these I have refrained from mentioning, because they may exist independent of a fracture; and when they occur after an accident, they merely show that some violence has been sustained. The deformed appearances of the limb, which are spoken of by authors, I have also purposely omitted in the above enumeration. I have done so because I regard deformity as a collateral symptom, to be met with only in any considerable degree in fractures attended with much laceration of the surrounding textures; and as the indiscriminate mention of its appearances, as a symptom always to be looked for, is, in my humble opinion, calculated to mislead the inexperienced Surgeon, the observations I shall offer upon this symptom must be considered as applicable only to fractures of this description.

Fractures of the humerus, accompanied with any considerable laceration of the soft parts, are usually attended with derangement of the fragments.

When the fracture passes through the bone just below the tubercles, the deformity is produced by the action of the pectoralis major, latissimus dorsi, and teres major; which being attached to the lower portion, near its superior extremity, draw it first inward and then upward. In the last direction it is powerfully forced by the action of the biceps, coraco-brachialis, and long portion of the triceps. The superior portion will be directed a little outward by the action of the supra-spinatus, the infra-spinatus, and teres minor, which make the head of the bone perform a rotatory motion in the glenoid cavity of the scapula.

When the fracture occurs between the insertion of the pectoralis major and the insertion of the deltoid muscle, the inferior portion is first drawn outward, and then upward on the external side of the superior. The cause of this position of the fragments is evident. The adductors draw the upper portion to the chest; and those muscles which arise above, and are inserted below the fracture, draw up the lower portion on the outer side of the upper.

Fractures just below the insertion of the deltoid muscle are often attended with great derangement of the fractured ends. The deltoid muscle raises the upper portion; and the lower is drawn up on its inner side. Sometimes the fractured surfaces are separated considerably from each other. In a case of oblique fracture that has lately come under my observation, the distance between the fractured ends of the bone allowed the finger, carrying the integuments and a portion of muscular fibre before it, to lie between them, when the arm hung steadily in the bent position by the side.

Fractures near the lower end of the bone, when oblique, are subject to great derangement of the lower portion; but when transverse, the displacement is not so great as in other situations — an effect which is to be attributed to the greater size of the bone at this part, and to the retentive power of the muscles arising from its surface.

In fractures of the inner condyle, extending through the bone in an oblique direction, the position of the broken portions is influenced by the position of the ulna with respect to the humerus. No displacement will appear when the arm is bent, but in the extended position the displacement will be evident.

When the fracture extends obliquely through the outer condyle, the broken portion may be drawn a little backward by the action of the anconeus.

Though I have here mentioned the more common varieties of displacement in fractures of the humerus, it is not to be considered that the fractured ends will always be found

deranged in the same direction even in fractures that may seem to be similarly situated. It will immediately appear, that the direction in which the different portions become displaced, is greatly modified by the direction which the fracture takes through the bone. The degree of laceration of the soft parts will also contribute to influence the direction of the fragments in whatever situation the fracture may occur. Suppose, for instance, that a fracture extends obliquely downward and inward through the lower portion of the bone, what would be the probable direction in which the lower fragment would become displaced? Would it be drawn up on the inner side of the upper portion? Certainly not; because the fractured surface of the upper portion lying on its inner side would prevent the muscles from drawing it up in that situation; it would therefore be drawn up on the outer side of the upper portion, inclining a little forward or backward at the seat of injury, according to the degree of flexion or extension of the forearm, and the degree of laceration of the soft parts.

In my observations upon simple fractures of the lower extremity, I endeavoured to show, that a principal object, in the treatment of these injuries, should be to fix the whole limb by some unyielding substance, continued from one end to the other. Let us now see how far the same principle will apply in the treatment of fractures of the humerus.

Like the thigh-bone to the pelvis, the humerus is articulated to the scapula by a ball and socket-joint. The former is connected to the tibia by a joint that has a hinge-like motion; and in this respect it does not differ from the kind of joint that connects the humerus to the bones of the forearm. They are also both acted upon by powers which tend to displace the fragments of a fracture in the transverse and in the longitudinal direction. Now, as these two bones are connected by the same kinds of joints to the bones above and below them, and as they are both liable, from the action of muscles attached to different parts of their surfaces, to be displaced in various directions when broken, we may ask what makes the great difference in the treatment of a fractured humerus and a fractured femur? The humerus, it will be seen, is so situated, with regard to the other parts of the body, that it may be allowed to hang by the side when fractured; and that, when placed in this position, the gravity of the parts below the fracture serves materially to prevent displacement in the longitudinal direction. In the arm, too, the muscles are so thin that splints act more effectually in preventing lateral derangement of the fragments. The thigh, on the contrary, is so placed, that it cannot be kept in a depending state during the cure of a fractured femur. Here we see that

the pendent position of the limb, in the treatment of a fractured humerus, is lost in the treatment of a fractured thigh. Again; the muscles surrounding the thigh-bone are so thick and powerful, that transverse displacement is easily produced; and, when the fracture is attended with much laceration, this cannot be prevented by any means which do not fix the whole limb. Thus we see, that from the position of the arm with respect to the trunk, and from the thinness of its muscles, we derive advantages in the treatment of a fractured humerus, from which we should conclude, even without a knowledge of the fact, that the treatment of fractures of this bone is far more easy than the treatment of fractures of the thigh.

There is one point, in the consideration of these accidents, which applies equally, or nearly so, to fractures of the humerus, treated in the common way, and to fractures of the femur; and this is the rotatory motion produced in the site of fracture, by powers usually independent of the muscles of the limb. This our curative means should prevent, for it is a matter of no trifling nature as it regards the ultimate result. It is certainly more likely to take place in a fractured femur than in a fractured humerus, from the greater weight and greater length of the lower limb; but still the causes which produce it in the one will also tend to produce it in the other. The short splints made use of in the treatment of fractures of the humerus, and frequently in the treatment of fractures of the thigh, have no power to prevent this motion from taking place. This, I think, will appear from the first experiment related in my paper on fractures of the lower extremities. If it needs further confirmation, it may be shown by two circular rods of any given length, with two of their ends brought into contact and surrounded by a piece of tube just large enough to admit them. If we take the projecting end of either of these rods, placed as I have mentioned, we shall find that, by carrying it out of a line with the tube, we shall move the rod which projects at the other end of the cylinder. But if we place the whole upon a plain surface, and attempt to rotate both the rods by the motion given to one, we shall perceive that the rod to which an impetus is given rotates freely within the calibre of the tube, while the other remains at rest. Now, a fractured arm or a fractured thigh, put up with short splints, is placed under circumstances very similar, as far as it regards the rotatory motion of the rods mentioned in this experiment. The only difference consists in the slight resistance which the muscles give to the rolling of the fragments, in consequence of their being placed as a soft cushion between the splints and the bone.

It will be observed that the rods thus situated cannot be

moved in the lateral or longitudinal direction, and very little in the angular; and, supposing them to be prevented from separating as they lie in a straight line, we can only produce a rotatory motion between them. Here we see that the rods can move in any considerable degree only in one direction; but the short splints surrounding a broken humerus not only do not prevent the rotatory motion to which the rods are subject, but they allow of displacement in three directions, lateral or transverse, longitudinal, and angular: therefore, we should infer that a broken humerus, put up with the common splints, is far less secure from the effects of passive motion accidentally given to the limb, than two straight rods whose approximated ends are placed within a portion of tube just large enough to admit them easily.

Indeed, if we lay aside for a moment the slight effect which the muscles have in preventing displacement, we may consider a broken humerus, put up with common splints, to be situated like two straight rods, with two of their ends placed in contact within a portion of tube *much larger* than is sufficient to admit them; and which therefore allows of considerable derangement of the approximated ends, as well as rotatory motion between them.

From what I have stated, it will be seen, that the muscles may oppose the derangement of the fragments of a fracture in three ways: — 1st, By the attachment of their fibres round the fractured part. 2dly, By acting as a cushion between the splints and the bone. 3dly, Those muscles which arise above and are inserted below the fracture, tend, by their contraction, to keep the fractured surfaces from separating from each other, as long as the soft parts remain entire.

It has been said that, while the muscular fibres which surround the fracture preserve their attachment at the seat of injury, they tend to prevent displacement of the fractured ends; but suppose they are torn through, and the fracture is quite loose, will the support which they and the other soft parts give to the fracture, as a medium between the splints and the bone, be sufficient to secure the fragments from lateral derangement — especially if the fracture is oblique? Certainly not. What, then, will become of the third retentive power, derived from the contraction of the muscles, which arise above and are inserted below the fractured part? This power, as soon as transverse displacement is effected, instead of retaining the fractured ends in contact, causes them to ride; and if this is not prevented, deformity is the consequence.

But it is not the lateral displacement of the fractured ends, and the consequent displacement in the longitudinal direction.

only, that demand our attention: we must guard against angular displacement; by which I mean such a position of the extreme ends of the fractured bone as causes an angle to be formed at the seat of fracture: we must also guard against rotatory motion, which may be occasioned by an impetus given to the limb below the fractured part. Our business is to prevent every kind of derangement, whether lateral, longitudinal, or angular, and thereby to prevent deformity; and every kind of motion between the fractured surfaces, and thus to ensure reunion. Are these indications answered by the common short splints?

In taking a general survey of what has been laid down by some authors who have written upon this subject, we are almost led to suppose that fractures of the humerus are unimportant accidents; that there is little to be done in the treatment; and that the Surgeon may confidently expect a favourable result. But I would ask the ingenuous and experienced Surgeon the result of his observations in the treatment of those cases which have come within his notice, and which have been treated by the common means. Has he not found it necessary to remove and repeatedly reapply his splints during the cure? Has he not frequently, in doing this, produced motion between the fractured surfaces of the bone? Has he not often found, on visiting his patient, that his splints and bandages were loose and disarranged? Has he not often experienced great difficulty in keeping the fractured surfaces in apt and proper contact? Has he not occasionally found all his efforts ineffectual in preventing the occurrence of deformity? Has he not often noticed the cure to be long and tedious? Has he never met with cases in which all his endeavours to produce a union of the bones failed to be successful? Then, who is there acquainted with the treatment of fractures of the humerus, that would say that the common means are sufficient for all the purposes required? Is the prevention of deformity and non-union of no importance to our patients? Is the frequency of their occurrence no stigma on our Profession? It might be said that the short splints have been used, and fractures of this bone have generally united. So a few years ago, even in this country, stumps were allowed to heal by the granulating process; many of them did well; but who will deny the great advantages arising from the present plans of treatment? I am aware that the best contrived means may be brought into discredit by the mal-practices of the careless and unskilful; but the treatment of fractures of the humerus with the common short splints cannot be supported upon principle; nor are they found sufficient to answer the indications which pre-

sent themselves, even in the hands of the most skilful Surgeons. Is it, then, enough because fractures of the simplest kind unite without deformity—is it enough because non-union is met with comparatively seldom—that we should still go on in the beaten path, and not try to avoid those modes of practice, the results of which disgrace us daily? I am disposed to believe, that my candid and scientific brethren will agree with me in thinking, that here the treatment of fractures calls loudly for improvement. It is our business to discover wherein the means we employ in the treatment of any disease or accident fail to answer our intentions; and to suffer such as are discordant with the soundest principles to sink into oblivion, and to adopt in their stead such as are more safe and found to be more suitable.

In the treatment of fractures of the humerus, as in the treatment of fractures of the thigh, our first object should be to fix the whole limb so far as to prevent any motion given to it from being felt in the situation of the fracture. In doing this the hand should be guarded from accidental alterations in position, though, from the great mobility of the wrist, I do not think that *slight* and *gentle passive* motion would be at all likely to affect a fracture of the humerus, even if it were of the loosest kind. Flexion and extension of the fore-arm should be prevented. The elbow-joint should be perfectly fixed during the union of the bone.

It has been seen that the humerus is articulated to the scapula and bones of the fore-arm by the same kinds of joints that connect the femur to the pelvis and the tibia. Hence it will appear, that the points of difference, in the treatment of the fractures of these two bones, must be drawn from the difference in their form, and from the difference in their situation with respect to the trunk. If the inferior extremity were attached to the scapula instead of to the pelvis, the treatment of a fractured thigh would differ very little from the treatment of a fractured humerus.

In the treatment of a fractured humerus, the curative indications which require to be answered by mechanical means, are, in my humble opinion, two:—1st, To fix the fore-arm and humerus at a right angle, so that any motion given to them may have its centre in the shoulder-joint; 2d, To prevent the fragments, when once placed right, from being deranged by the involuntary action of the muscles, or by any accidental motion *passively* given to the limb below the fractured part. An apparatus, used for these purposes, should be so contrived as to admit of being easily adjusted, and so as to maintain the situation with respect to the limb in which it is first applied, without producing more pain or incon-

venience to the patient than necessarily arises from the proper confinement of the parts.

As no contrivance, hitherto published, that I am acquainted with, can be made to answer these indications, I have invented an apparatus which appears to be calculated to answer all the purposes for which an apparatus is required, till the process of union is completed.

The apparatus to which I allude consists of three portions of beech, two of which are fixed together at a right angle; and the other is straight, and of the length of the humerus. The two portions connected are long enough to reach from the head of the humerus to the wrist. They are about two inches wide, and are excavated to the depth of about a quarter of an inch. That portion destined to lie upon the upper arm has two straps attached to it transversely. Each of these straps is armed with a buckle, and is long enough to reach about three-fourths round the arm. One of the straps is fixed to the splint close to the angle formed by the junction of the two portions of beech; and the other a little below that part of the splint, which is made to lie by the side of the tendon of the pectoralis major; and in such a way that the buckles lie upon the splint. Another strap is fixed to that part of the splint intended to lie upon the fore-arm, close to the angle formed by the junction of the two pieces of beech. Two studs are also placed upon this part of the splint, one in the middle and the other near its end, for the reception of straps destined to pass round the fore-arm. The other splint is of the same width as that last described, and of a length to reach from the head of the humerus to the lower end of the bone. This splint has two leathern straps furnished with buckles attached to it in a line transversely to the splint, and opposite to the straps fixed upon that part of the angular splint, which is destined to take the line of the humerus. Each of these straps should be sufficiently long to reach about three-fourths round the arm, and should be attached so as to be received by the buckles placed upon the angular splint. This splint is hollowed out about one-fourth of an inch at its upper part; and the depth of the excavation is gradually diminished to within two inches of the lower end, where the splint is left quite flat.

What I have above described constitutes the whole of the apparatus.* But, besides this apparatus, it is proper, in order to add as much as possible to the comforts of the patient, and to secure the fracture from every kind of derangement and

* The same apparatus admits of being applied to adult arms of various lengths and sizes.

motion, to make use of three other splints, which may be made of split deal, in the common way. One of these should be long enough to reach from the arm-pit to the inner condyle, another from the point of the shoulder to the outer condyle, and the third from the elbow to the fingers.

Having now given a description of the apparatus, and mentioned the length and number of common splints I use with it, it remains for me to show the manner in which it is to be applied to the limb. This, in general, should not be done till the high inflammation produced by the injury is considerably got under, which is usually in about three or four days, more or less, according to the degree of injury of the soft parts; but if the bones ride, or if the patient is restless, it is proper to apply it lightly as soon as possible after the accident.

The Surgeon should place the fore-arm so as to form a right angle with the humerus, and then support the integuments, by means of a spiral bandage, as high as the fractured part. This part, being nicely adjusted, should be surrounded with strips of soap plaster, which should be drawn moderately tight. The Surgeon having pads properly made for each splint, should now commence the application of the apparatus, by placing the angular splint upon the fore-arm; and then the longest deal splint, with a tape extending along its outer surface, in the ordinary way, should be placed beneath the fore-arm and hand. This splint and the angular splint should now be confined to the fore-arm by means of the proper straps attached to the latter. This being done, the fore-arm should be given to an assistant, who should keep it at a right angle with the humerus; and, if the fragments ride, he should be directed to draw down the fore-arm, while the Surgeon placed the upper part of the angular splint in a line with the biceps muscle, and adjusts the fractured part. The straight splint belonging to the apparatus being placed upon the back of the arm in a line with the humerus, the assistant should be directed to support this splint and the angular one in their proper situation, with the fractured bone between them. The Surgeon should then place a piece of common splint on the inner side of the arm, so that it may extend from the axilla in a line with the bone to the inner condyle; and another on the outer side, extending from the point of the shoulder to the outer condyle. The proper straps fixed to the apparatus should then be carried over the splints and buckled moderately tight. It is advisable to place an additional strap round the limb between these, as it assists in keeping the splints steadily and firmly together. The arm should now be placed in a sling extending from the elbow to

the hand; and just short enough to steady the arm comfortably as it hangs by the side.

When the Surgeon wishes to examine the fracture, he may do it without disturbing the fragments in the least, by removing the splint placed along the outer side of the arm, while an assistant keeps the apparatus from shifting its situation.

By this plan of treatment the parts are kept quiet in their natural position; and thus deformity is prevented, and nature is assisted in her efforts to consolidate the bone.

Here it might be asked, why are the splints not confined to the scapula in the same way as the apparatus for the lower extremity is confined to the pelvis, in the treatment of fractures of the thigh? A little consideration, however, will make it appear, that though the humerus is articulated to the scapula by the same kind of joint as that which connects the thigh-bone to the pelvis, it is by no means necessary that the apparatus, described for fractures of the humerus, should be fixed to the scapula in the treatment of a fractured arm. The scapula is placed at a part of the body where it may be kept at rest without any inconvenience to the patient. The situation of the scapula, therefore, may be regarded as even more than sufficient to compensate for the loss of that support which the thigh receives in consequence of connecting the splints to the pelvis. Hence we may conclude, that any connexion of the splints to the scapula may be regarded as superfluous.

It now remains for me to substantiate the utility of the apparatus which I have endeavoured to describe, by relating cases, for the cure of which it has been employed. In doing this I shall purposely refrain from mentioning any that have occurred in my private practice, as I have been kindly favoured with more than sufficient for this purpose by the Surgeons of the Borough hospitals.

April 15th, 1822. — John Alefounder, ætatis twenty-nine, was admitted into Guy's Hospital, under Sir Astley Cooper, for the cure of a fractured humerus. The fracture was occasioned by a fall from a height of twenty-five feet. It was situated a little below the insertion of the deltoid muscle, and extended through the bone in a direction slightly oblique.

I saw him the fourth day after the accident, and, at this time, the lower fragment was drawn up considerably, indicating the fracture to be of the loose kind. The fragments being placed in proper apposition, the apparatus was applied, and the man was directed to carry the arm in a sling. Three

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weeks after the accident the apparatus was taken off, and the bone was found straight and firmly united.

During the cure, I frequently moved the limb to show the pupils the power which the apparatus possesses in holding the upper portion, so as to make it move simultaneously with the lower, when the limb is passively rolled upon the scapula. Whenever the arm was moved, as here mentioned, the head of the humerus could be as distinctly felt rolling upon the scapula as if the bone were entire. The man never felt pain in the fracture from the rotatory motion given to the limb, nor was the process of union retarded. These circumstances are sufficient to show, that the fractured surfaces remain at rest when the limb is passively moved upon the scapula by an impetus given to it below the situation of the injury.

Now, if this be granted, it can be of little consequence whether the impetus given to the limb be intentional or accidental, supposing it is passive, and not violently applied; for if the fractured surfaces are not disturbed in the one instance, it is not to be expected that they will be in the other: therefore we should infer, that the fracture is kept quiet at all times, when the whole limb is being gently and *passively* moved upon the scapula, provided that *no resistance* is made to the motions of the limb by the *voluntary action* of its muscles, and that the fracture is not so high up as to prevent the splints from holding the upper fragment firmly: Hence we should conclude, that the apparatus, by keeping the fracture quiet, favours a speedy consolidation of the fragments: and allowing this to be the case, the patient may reasonably expect the powers of the limb will be restored to him proportionably early; and as the pain occasioned by the derangement of the broken portions is avoided, as well as that which arises from repeated attempts to place them in their proper situation, the cure will be effected with much less inconvenience than he would experience under treatment by the common means. By this mode of treatment, too, the Surgeon will be spared from that painful anxiety which arises from the knowledge of the insecurity of the fracture, and from the consideration that his reputation would suffer from what it might not have been in his power to prevent — the occurrence of deformity or non-union of the bone.

John Barret, ætatis sixty-three, was admitted into St. Thomas's Hospital November 11th, 1822. A few hours before his admission, he fell down four steps, and pitched upon his elbow in the stone yard. The force of the fall produced a fracture of the humerus, which commenced a little above the condyles, and extended very obliquely through the

bone in a direction upward and outward. I saw him the fourth day after the accident. He was then in bed, with his limb lying upon a pillow. The lower fragment was drawn up from two to three inches. The limb was much swollen, and the man was suffering greatly. Short splints had been applied, but were found ineffectual in supporting the parts in their proper situation.

This man was under the care of Mr. Travers, who now politely offered me the treatment of the case. Assisted by his apprentice Mr. Dunkin, I applied the apparatus lightly, but, at the same time, sufficiently close to prevent the fractured ends from riding. Two days after the application of the apparatus, the straps were tightened, and the man was desired to leave his bed, and carry the arm in a sling. February 28th, 1823, the apparatus was taken off, and the bone was firmly united.

In this case, it will be observed that nearly three months had elapsed before the consolidation of the bone was completed. I have selected it purposely to illustrate the effect of motion between the fractured surfaces, in retarding the progress of union, and to show the necessity of guarding against the voluntary action of the muscles.

This man was particularly dull of understanding, and could not be prevailed upon to keep the limb quiet. He frequently raised the arm by the action of the deltoid muscle, and thus caused the fractured surfaces to rub upon each other. He was frequently informed, that his omitting to comply with directions, in this particular, would retard his cure; but it was found he either did not comprehend or recollect the caution. The straps were therefore drawn closer, even to a degree which was painful to him; but crepitus was still produced by the voluntary action of the muscles, though none was felt when the limb was passively rolled upon the scapula. I felt convinced that union would not take place as long as motion was continued in the fracture; and, as reasoning was lost upon him, I bound the arm to the side, so as to deprive him of the possibility of raising it by the voluntary action of the muscles; and, at the same time, shortened the sling, so as to keep the fractured parts closely applied to each other. After persevering in this plan for three weeks, I was happy to find that it had perfectly succeeded. The extreme points of the fractured ends could be felt when the fracture was united, and it was ascertained that the obliquity was above one inch and three quarters.

Sarah Cooke, ætatis sixty-two, much troubled with rheumatic gout, was admitted into St. Thomas's Hospital February 11th, 1823, under the care of Mr. Green. She had a trans-

verse fracture of the humerus about mid-way between the insertion of the deltoid and the head of the bone, and a transverse fracture of the olecranon. Neither of the fractures was attended with any considerable laceration of the soft parts. The fracture of the humerus was easily discovered by rotating the lower portion, while the upper was fixed; and the fracture of the olecranon was equally distinct; but as the periosteum was not torn, the fractured surfaces were not separated from each other. Both the fractures were attended with great tumefaction in the affected parts, which was removed by rest in the horizontal position, and cooling lotions to the limb.

February 21st, I saw her, with Mr. Green, who kindly offered me the superintendence of the case. The apparatus was now applied, by his dresser Mr. Thomson, and she was directed to leave her bed, and carry her arm in a sling. March 22d, the apparatus was taken off, and the humerus was found united, and also the olecranon, by the interposition of bony matter. The callus which joined the olecranon could be distinctly felt through the integuments.

This case is interesting, inasmuch as it shows that her habitual disease, which had greatly enlarged the joints of her fingers, &c. and limited their motion, did not interfere with the process of union in the fracture; and that the apparatus is applicable in cases which are complicated with fracture of the olecranon, when the periosteum remains untorn.

Several other cases of fracture of the humerus have been treated with the apparatus above described, in Guy's and St. Thomas's Hospitals, but the limits of this paper will not allow of their insertion.

I have some observations to offer upon the effects of this apparatus in the cure of fractures which have resisted the common means, but these I must reserve till a future period.

From the length of the present paper, I must also refrain from entering into the treatment of that variety of anchylosis which so frequently occurs after fractures extending into the elbow-joint. But this, as I have above hinted, in conjunction with the treatment of the same affection in the knee and ankle-joints, is of sufficient importance to form the subject of a future communication.

Great Surrey Street, Blackfriars' Road,
9th Aug. 1823.

PART II.

ANALYTICAL REVIEW.

Medical Jurisprudence. By J. A. PARIS, M.D. F.R.S. F.L.S.
Fellow of the Royal College of Physicians; and J. S. M.
FONBLANQUE, Esq. Barrister at Law. In three volumes,
8vo. Pp. l. 440, 472, 153, with 371 pages of Appendix.
London, 1823.

BUT a very few years since, the subject now before us was, in this country, the most neglected of any connected with medicine: it was an opprobrium to our medical literature. But it was not the character of our literature alone which suffered by the neglect: the Practitioner was without guides whereby he might have been directed in a very necessary and an important department of his duty. This duty was consequently, and not unfrequently, either altogether neglected, or insufficiently and, in other respects, improperly performed. The state of medical jurisprudence amongst us is now entirely changed, and the works which have lately appeared may be considered among the most classical and most interesting connected with our Profession. So beneficial a change in the literary study of the subject cannot fail to be followed by the best results in the practical discharge of the duties which relate to it; and, indeed, those results are already evident, and they will become still more so as opportunities arise for their appearance.

There is no department of medicine wherein works of an approved character are so necessary as in that now before us: being matter-of-fact productions—being founded on, and even built of, materials derived from the direct evidence of more than one of our senses; furnishing a collection of such facts far greater than can fall to the share of individual experience and investigation; applying these facts, which are of the most tangible description, to the various circumstances and relations in which they may occur, and in which observation has shown them to occur; and, finally, presenting them to our acquaintance and study, in a methodic manner, and assisting, as occasion requires, our recollections of them that might otherwise betray us into error and difficulty, owing

to the comparative infrequency of these facts as objects of individual experience — in virtue of such qualities, works on forensic medicine deserve a considerable portion of our regard; and there are few, in other branches of our science, for the very reasons which we have now adduced, that will obtain a more lasting reputation. But, although we put so high a value on works of this description, we do it with the proviso of their possessing merits, at least, of a respectable order.

These which have lately engaged our attention have not been deficient in the highest requisites of literary and practical excellence; it is for us at present to show how far the copious work now before us possesses these qualities: here, however, we must state, that our confined limits, owing to the numerous and important papers which it was our duty to insert in our Original department, and to the number of those now before us, which it is incumbent on us to publish in our next Number, oblige us to be succinct in our analysis of its contents. We have also other, and equally cogent reasons, for brevity in the present instance. The most important topics which the present work embraces have been brought before our readers, on various occasions, as fully and satisfactorily as the limits even of the most extended reviews will permit: we cannot, therefore, expect to excite their attention by entering on the discussion of the same subjects, especially as these do not admit of much difference of opinion, and as the majority of them are founded on accredited evidence and acknowledged principles of science. Those topics, indeed, which do admit of the greatest contrariety of opinion — and some of them are of the first importance in forensic medicine, both as respects the individuals more immediately concerned and the professional reputation of the medical witness, have been fully examined by us, when reviewing the work of M. Capuron on Law Medicine as it relates to Midwifery; and other departments of the subject now before us have come under consideration in preceding Volumes of the *REPOSITORY*, to which we shall occasionally refer our readers.

After a well-written and an ingenious introduction, in which the history of medical jurisprudence is succinctly detailed, and the plan of the work commented on, the authors enter upon the *first* part of the *three* into which it is divided: this part comprehends an enumeration of the different medical corporations, with an account of their charters, powers, and privileges, together with the subjects of medical police. The *second* part embraces all those subjects connected with medical evidence, as applicable to civil and ecclesiastical suits: in this part the order of the subject corresponds with that of the progress of human life from infancy to old age. The *third*

contains the inquiries which are necessary to medical evidence, as applicable to *criminal* cases. Thus the *first* part comprises the most material questions relating to *Medical Police*; the *second* and *third* those which belong to *Forensic Medicine*.

PART I. *1st, Of the College of Physicians.* — The authors have devoted upwards of fifty closely printed pages to an account of this learned body, and of the policy which it has thought proper to adopt towards its licentiates and others. The attack which has been made at this place, by implication, on the character of the licentiates collectively, we are, from various considerations, by no means surprised at observing; we even expect, nay hope to see it repeated, if not from the same quarter, at least from some other which may be as justly considered to be the organ of the College, as the authors seem to be on this occasion. We consider it no small evil, that individuals, whose terms and opportunities of education have been as long, as legitimate, and as complete in every point of view, whether a literary, a philosophical, or a medical education, be contemplated, as any one of those who consider themselves their superiors; individuals who have studied under the direction of the first masters of the age in these departments of human science; who have afterwards visited other countries, in order practically to extend their views of science; and who, setting themselves down in the metropolis in order to reap the fruits of their studies, are, in the first instance, debarred from the immunities and honours to which they are, from these attainments, entitled, and are afterwards even subjected to the supercilious contumely of some who are their inferiors in literature and science, merely because these attainments have not been acquired at Oxford or Cambridge: — These are the grounds on which we consider the present attack an evil, and we wish it to be repeated, because we believe that, in this age and country, the knowledge of, and repetition of, an evil, will lead to its removal: — “*Ex vipera theriacum*,” is a proverb of no very limited application.

The College of Physicians confine admission to a fellowship to graduates of Oxford and Cambridge, and the authors argue in support of the justice of such a limitation, on the tacit assumption that these universities are the only sources of knowledge, and all their inferences betray the sophistry arising from this postulatam. The arguments which they have adduced, when stripped of their sophisms, amount to nothing more than what any one will readily grant, who is possessed of requisite information, namely, to the propriety, and even necessity of a liberal education in the higher walks of physic. To this we cordially concede, for we are so thoroughly convinced of the

advantages of a classical and philosophical course of study, in an university of reputation, as the best introduction to the study of medicine, and as the best guardian of the dignity and public consideration of the medical character, that we consider the completion of a regular and satisfactory course of literary and philosophical studies, before that of medicine be commenced, as an indispensable requisite to medical honour. But, is there any one who is acquainted with the state of knowledge in the different universities of the united kingdom, or who has had opportunities of viewing it in relation to the condition of learning and science in other countries of Europe, and who, at the same time, is unbiassed by the various idolatries, from which the most cultivated and most enlarged minds are alone free—who will conclude, with our authors, that Oxford and Cambridge are the only sources whence a due knowledge of ancient and modern learning may be obtained?*

According to the present policy of the College of Physicians, its licentiates are subjected to various indignities,†

* For some very excellent reflexions, on the subject of the British and foreign universities, we refer our readers to Gibbon's *Miscellaneous Works*, volume first, from page 26 to page 41, orig. edit. and to the works of Dr. Adam Smith.

† As an instance of the unsuitableness of the bye-laws of the College to the present state of knowledge, we may mention that any individual who, after having acquired the rudiments of education necessary to an entrance at College, has devoted four years to the study of literature and philosophy, in the University of Edinburgh, and afterwards as many to that of medicine and of the sciences on which it is founded, as well as of those with which it holds relation, and who has there acquired a degree, after a residence of eight years, after a most rigid examination, and after other trials on prescribed subjects; during which eight years, his terms of study have averaged eight months in every year; who afterwards has enlarged his views of disease by observing the practice of the metropolis; who subsequently has visited foreign countries in order to extend his knowledge; and who, lastly, has determined on exercising his professional knowledge, thus legitimately acquired, in the metropolis, as offering the best field for exertion after so long and so expensive a course of study, and, in pursuance of this determination, has applied to be admitted a member of the College—any individual thus initiated in science, receives for answer, that he can only be allowed the examination appointed for the admission of a licentiate; and although his education is more complete than can be obtained at either Oxford or Cambridge, he is treated as an inferior after being thus admitted, and finds the combined influence of the fellows of the College directed against his endeavours to obtain celebrity in his Profession by legitimate means:—“*Hic cum hominibus non cum diis agitur*,” is a fact which he is often obliged to acknowledge. Happily such an individual is consoled for the contumely to which he is occu-

however great their opportunities of acquiring knowledge may have been, or however much their acquirements may be acknowledged. Some of these may be gathered from the observations which the authors have thought it necessary to make in the work before us, to which we refer our readers. But, as we consider that both sides of the question ought to be heard, and as our limits prevent us from going into its merits, we beg leave also to refer our readers to the well-known letter of Dr. Wells, and to a paper on the same subject published in the *Edinburgh Medical Journal* for October, 1820, to which latter we consider the observations of the authors in the light of an official reply. If this surmise be correct, we congratulate the author of that paper on the superiority of his arguments; for, although they may be considered as having been replied to, they have not been answered. And if they could not be answered by the authors, notwithstanding the learning and science which characterize them, we despair of others being more successful in the attempt.

We have every reason to believe that, in consequence of the licentiates looking on their privileges with indifference, and even with spiritless apathy, the fellows of the College have considered it proper to treat them in all things as if they did not belong to the College at all.

In the work now before us, we find the authors asserting and attempting to prove — with what success we cannot at present show — that the licentiates are not members of the College: indeed, they treat this unfortunate class of Physicians with much less ceremony than the Surgeons and Apothecaries. We thought that the Surgeons, at least, would not have escaped so easily, for we believe that they practise more as Physicians than as Surgeons: — we recommend them, however, always to consult fellows of the College when they bring themselves into difficulties, as a matter of sound policy; but still to go on and prosper; and thus the obnoxious licentiates will be placed, as it were, between two fires. “*Honesta oratio est;*”* and such the licentiates find it, to their cost.

The authors tell us that we are not members of the College. We call ourselves a member, as may be seen on the cover of this Journal, and we thought that it could not be disputed,

sionally subjected, by the following observation of Montaigne: — “C’est le prix de l’espée que vous cherchez, non de la gaine. Il le faut iuger par luy mesme, non par ses atours: et, comme dict tres-plaisamment un ancien: ‘Sçavez vous pourquoy vous l’estimez grand? Vous y comptez la haulteur de ses patins.’ La base n’est pas de la statue.” — (*Mont. lib. i. ch. 42, p. 87. Desoer’s Edit.*)

* Simo in the *Andria*, Act I. sc. 1.

until they told us the contrary:—they must excuse us for thinking so still. For without referring to as long, and as legitimate terms, and as extensive opportunities of education as any fellow of the College can adduce—which, however, goes for nothing in a licentiate—we are simple enough to consider that admission according to prescribed forms and examinations, and after payment of the usual fees, is sufficient to constitute a member, although we have perfect knowledge that all these do not make us a fellow. If the governing part of the College do not consider its licentiates to be members, why does it oblige members of the Surgeons' and of the Apothecaries' Corporations to disfranchise themselves from these before they undergo the forms of admission at the College? When we have been honoured with the forms of admission into any corporate body, after observing the appointed requisites to admission, we naturally consider ourselves members of that body; and we even would think that any person who should seriously assert, with an eye to ourselves individually, that we are not a member, notwithstanding these observances, intended little less than to insult us. We do not say, or even think, that the authors, in the excess of their zeal for the College, had any such intention: but let them place themselves in our situation:—If they were, we are confident that they would repel, with becoming spirit—and be the first, as well as the most able to do so—every encroachment on what they considered their rights, and every attack, even by implication, made upon their professional character.

We spoke of encroachments;—can the authors deny that the licentiates have not suffered from them? Was not the College formerly in the habit of summoning the licentiates to the comitia majora? Were not the licentiates formerly indulged with the show, although the substance was more or less withheld, of constituting a part of the College? Does not the influence which the fellows exert, as a body, in order to have one of themselves appointed to fill each vacancy in an hospital as it occurs, as well as to exclude a licentiate from every appointment of honour or emolument, real evils, under which this class of Physicians labour? Are not these evils greatly on the increase, as well as others which we think unnecessary to mention? Indeed, we should not be astonished were we to see, within a very short period from the present, the licentiates entirely excluded, by the laws of the public institutions themselves, from the possibility of admission, even as candidates for the office of Physician to them. These are the grounds on which we mention encroachments; and we should not have noticed them, did we not actually believe what the authors have thought proper to state, as the prelude to others of no small importance.

We, however, console ourselves that under even the worst system, the well-educated Physician, who is also prudent and industrious in his profession, will attain considerable eminence; although to do so will require extraordinary exertion: but as difficulties present themselves, those manifestations of intellect will be brought into exercise, which are the most necessary to professional celebrity: and consequently, although these difficulties may retard his advancement for a time, his elevation will not be the less certain, nor the less secure. It therefore, in our opinion, remains a question, Whether as much good does not result to the individuals who are thus aggrieved, from the very obstacles which are placed in their way to eminence, as would follow from a more liberal policy? In the meanwhile, the man of learning can ill brook any sort of indignity, whether it be real or constructive. His sensibility is seldom obtuse, unless it be from a repetition of this species of suffering; and, although he may repine but little at the sacrifice of his prospects, as far as his professional emoluments are concerned, still he feels not the less acutely the contumely to which he is subjected: — “*Gravius contumeliam ferimus quam detrimentum.*”

Thus far we have spoken with reference to the policy which the College has thought proper to adopt. We have done so, because we consider ourselves, although but humble journalists, bound, by the duty which we owe the Profession in that capacity, to speak our sentiments without reserve, when matters of high import to the Profession and to the community come legitimately before us, and when we consider that those sentiments tend to promote the interests of both. As journalists, we by no means think lightly of our influence, but we only wish to exert it in the cause of truth. To the promotion of that end, it seems to us proper that we should add a few words, with stricter reference to the licentiates themselves.

The College enacts that no one shall present himself in order to become a licentiate unless he has obtained a degree, after two years' study at an university, and we believe that any university will not answer the purpose. This is sufficiently easy, if nothing be looked to by the applicant but the bare fulfilment of this injunction: and here we consider that the College makes more than double amends, by the latitude which it gives to the admission of licentiates, for the narrowed grounds of admission to a fellowship. But even these qualifications — although one would suppose that no Physician could be a Physician and be devoid of them — are not unfrequently disregarded; and even this insufficient period of study at an university, which period ought at least to be

twice as long, is not observed on the part of some who obtain admission as licentiates. We verily believe that the College is not aware, at the time, of the deceit which is practised upon them, as their law is fulfilled by the production of certificates of actual attendance. But we have sufficient reason to know, that in several instances such certificates are obtained after little more than forty-eight hours having been passed at the places whence they are procured. This cannot fail of coming to the knowledge of the College, when it is too late to be remedied in respect to the individual thus admitted; and it can as little fail of lowering the respectability of these individuals, and of reflecting upon the licentiates, as a body, in the eyes of the fellows whose education has been regular and expensive. No one can have any reason to censure the College for want of liberality in the admission of licentiates, or for unfairness in the examinations to which they are subjected. Were we disposed to find fault, we would blame the College for not exacting from them a longer and a more regular course of study, at an university of reputation; for the facile manner in which the half-educated may become licentiates, with a little previous preparation, is a cause, and, we think, an increasing cause, of the very little consideration with which this class of Physicians is treated; and, although those who thus obtain admission are comparatively few, still the deception—for we can call it no better—which is practised upon the College by that few, becomes a serious evil to those amongst the licentiates who, from the attention which they have paid to their education, deserve equal consideration with the fellows themselves.

But this is not only the cause of the little regard which the licentiates receive as a body; it is also the source of disunion amongst themselves. Those amongst this respectable class of Physicians who possess influence, do not exert it on occasions when they legitimately ought, as when the influence of the fellows of the College is combined against a licentiate, in order to obtain the office of Physician to an hospital for one of their own number. What is the reason of this disunion? Do not many of the licentiates who have attained eminence consider, owing to the causes just pointed out, that the merely being a licentiate carries but small recommendation with it? Are not others averse from acting in any thing which, even by construction, should tend to disoblige a fellow—expecting that, in the fulness of time, they shall be elevated to the same rank in the College? Do they actually suppose that men of sense will be seduced, by the spiritless meannesses of which they thereby become guilty, to make them their associates? We leave those licentiates

who thus act, or who, in any other respect, lower the dignity of the medical character, to answer those questions from their own experience. They, doubtless, know the bliss of "hope deferred;" for notwithstanding its reputed misery, deferred hope implies a desired object; and pleasure, they well know, and no doubt feel, results from the zeal with which the object of desire is prosecuted, even although it be prosecuted with all obsequiousness and humility, and under all the contumely to which obsequiousness is deservedly subject — therefore they, even in this way, may be happy. But their hope is not merely deferred — it is seldom gratified, and if at all gratified, it is only in such a manner as to lead them, who thus aspire, to crawl more lowly for its attainment. The mind that has once stooped below its proper dignity will stoop again and again, and each time still lower — yet hoping that the rewards of former servilities may not be lost. Notwithstanding its delusiveness, the hope is, to minds thus constituted, a pleasure, and even the last which disappointment destroys — excite but this desire, and, in spite of experience, its victims hope on till death. There we leave them to that peace which their aspiring submissiveness never endangered, and to that oblivion which their nameless existence cannot arrest.

The Physician of sense, of education, and of sound medical knowledge — whether a fellow or a licentiate of the College, will sooner or later find out that, although he has many difficulties to contend with in the present state of medical practice in the metropolis, these qualities are alone substantial — that these alone will eventually carry him to eminence; and he will as certainly discover (what Montaigne has already expressed with characteristic terseness), that, although collegiate honours are the pedestal, they are not the statue, — We pass on to other topics — we have to thank our authors for the one now dismissed. — That spirit is worse than poor which will calmly submit even to a constructive indignity.

Our authors next give an account of the other corporate medical bodies, after which they notice the exemptions and liabilities of medical Practitioners. With respect to actions by Practitioners, although a Physician cannot maintain an action for fees, "*yet pro consilio impenso et impendendo* is a good and valuable consideration for an annuity," which was formerly a very frequent mode of remuneration. "If a bond, bill, or note, be given for medical attendance, the consideration would be good, though the original fees could not have been recovered." If there be any promise, a Physician may receive a quantum meruit. "All Physicians may practise surgery (92 Hen. VIII.); though Surgeons may not encroach in

physic;" and a Physician, when practising surgery, may sue and recover as a Surgeon.

Practitioners are liable to damages in an action of trespass on the case, if they undertake the cure of any wound or disease, and if, by neglect or ignorance, the party is not cured, or suffers materially in his health. A Surgeon or Apothecary is also responsible for the negligence and unskilfulness of his apprentice or servant. Similar actions would be maintainable against Physicians; "but as internal injuries are less demonstrable than external, there might be some difficulty in obtaining the necessary evidence."

On the subject of *midwifery*, the authors inform us, "that there is some probability that both the College of Physicians and the College of Surgeons will decline all future interference with this branch." We are sorry to hear it; for if the practice of this department be not interfered with by the Legislature in an effective and enlightened manner, we shall have a wider avenue opened to irregular practice, not only in this branch of medicine, but in every other, than has yet tended to seduce uneducated and self-sufficient charlatans to invade the medical Profession. Females, even the well-informed of them, are but little able to judge of the character of Accoucheurs but from vulgar report or private recommendation; and either the one or the other may be as efficient in the favour of the empiric as in that of the man of science. The female, also, who would entrust the former in so important a duty, will not hesitate to employ him in other departments of practice, if he choose to desire it, and, whether he desire it not, his opinion, in cases purely medical, will be often requested. The ignorant are seldom devoid of presumption; and the hopes of success and of emolument will generally be found greatly to outweigh every alarm for the fate of a patient, and every fear of exposure which such individuals are capable of entertaining.

We now arrive at two very interesting chapters, namely, "*of the preservation of public health*," including remarks on the *burial of the dead*, and "*of quarantine, lazarettoes, and other establishments of plague police*." Of these we cannot convey a satisfactory idea within our limits; we therefore refer our readers to this part of the work, where they will have reason to be satisfied with the authors' learning and abilities.

Under the latter of these heads they propose the following questions:—

I. "Are all epidemic fevers contagious?" This question seems to be answered by the authors, by allowing that epidemics are frequently contagious, although not necessarily so.

II. "Does the matter of contagion require the aid of a certain state of the air ('pestilential constitution of the atmosphere') to give effect to its powers and propagation; and to what causes are the decline and cessation of a contagious pestilence to be attributed?" This question is answered, after referring to the opinions and observations of various writers, by considering "the singular career which a pestilential epidemic runs, having a beginning, height, and decline," to be explained only "on the idea of the pestilential constitution of the air undergoing corresponding changes; and it is probable that the return of a plague is a revival of infection that has been latent or dormant, until a particular state of atmosphere rouses it to action."

III. "Can filth and animal putrefaction generate contagion?" The authors do not state with sufficient precision whether they conceive that these causes are alone productive of contagion, or whether an additional cause, the pestilential or epidemic constitution of the air, is also required to its generation.

IV. "Can a fever, produced by fatigue, unwholesome food, &c. be rendered contagious in its career by animal filth, impure air, &c.?" This is answered in the affirmative. While we allow the justice of the answer, we may contend that, although a fever thus produced may become contagious to a few, who, owing to particular states of predisposition, are obnoxious to it, still the contagion will not extend far, unless the state of the atmosphere be favourable to its propagation.

Some important observations and suggestions conclude this part of the work, under the heads, "*medical police*" and "*bills of mortality*."

PART II.—Having considered the charters, statutes, laws, and privileges, of the several medical bodies corporate, and taken a view of the prominent subjects relating to public health, the authors enter upon the *second* part of the work, which may be viewed as the *first* part relating to *forensic medicine*, according to the strict meaning of the term. In this part they follow that arrangement "which is afforded by a natural and immutable scale,—the life and propagation of the human species, from its commencement to its close."

This part of the work is very appropriately prefaced with remarks on medical evidence: these are judicious, and calculated to be useful to all classes of Practitioners. Here we shall detach a few passages from this important chapter:—

"It has been supposed that medical Practitioners may avail themselves of the privilege of legal advisers, and that they are not bound to divulge the secrets of their patients, reposed in them in the course of professional confidence; undoubtedly this confidence ought not to be

violated on any ordinary occasion, but when the ends of justice absolutely require the disclosure, there is no doubt that the medical witness is not only bound, but compellable to give evidence; ever bearing in mind that the examination should not be carried further than may be relevant to the point in question; of this the court will judge, and protect the witness accordingly."—I. p. 160.

"As to the mode in which a medical witness should deliver his evidence, very different advice appears to have been given by different authorities; while some, impatient of delay, and dreading the arts of examination, recommend their pupils or readers to open at once all the stores of their reasoning and information; others, fearing the effect which cross-examination may have on nervous or embarrassed witnesses, advise that no more shall be disclosed than categorically meets the question of the counsel; and to this we incline, with this difference, that, as we should deem too costly a retention of truth as blameable as the flow of garrulity with which we have sometimes seen a court overwhelmed, we recommend the witness to steer a middle course, first answering patiently, distinctly, and tersely, the questions put by the counsel on both sides, the court, and the jury; and if none of these elicit the whole truth, and any material point remains to be disclosed, the presiding judge will always admit and gratefully receive the additions or explanations which may be necessary to the ends of justice." "Notes, if taken upon the spot or immediately after a transaction, may be used by a witness to refresh his memory; and as to dates, numbers, or quantities, it is generally expedient to have them; the notes should be original, not copies; if there be any point in them which the witness does not recollect, except that he finds it there, such point is not evidence, for the notes are only to assist recollection, not convey information."

"The witness must relate only that which he himself has seen or observed; that which he has heard from others is not evidence as coming from him; except, indeed, where some expressions or declarations of the parties concerned have become a part of the *res gesta*; but the declarations of a dying man are evidence when related by a third person on oath, though the party making them was not sworn; for the law presumes that the solemnity of the occasion may dispense with the form, and that a man, trembling on the brink of eternity, will never risk salvation by falsehood. To give this weight to a declaration, it is necessary that the party should believe himself to be dying; Mr. Justice Bailey is reported to have said that the party must be satisfied that recovery was impossible: we think that the reporter must have been mistaken; for such a rule would exclude all such declarations; hope is the latest faculty of the mind. 'I am better,' has not unfrequently been the last articulation of expiring nature."—I. pp. 163—165.

The witness should bear in mind, under circumstances in which he may be possibly placed, that he is not bound to give any evidence by which he may render himself liable to any criminal prosecution.

Marriage, being a necessary preliminary to the propagation of our species, according to our civil and religious institutions, is the next subject which is taken into consideration, as far as it is connected with medical science. At this place the authors chiefly confine themselves to the investigation of the *capacity of individuals to contract marriage* in respect of *age, mental endowment, and corporeal fitness*: the question of *consanguinity* is also noticed. For the details respecting these matters, as regards their legal bearings, we must refer our readers to the work. After some observations on *divorce, on nullity of marriage*, the authors discuss "various questions connected with the foregoing subjects," and elucidate them "by physiological researches." At this place, *ages*, especially that of *puberty*, are first considered, at great, and, we think, unnecessary length. *Impotence and sterility* are next examined, as regards both sexes, under the separate heads of *organic, functional, and moral causes*. These topics are fully discussed, as respects their physiological and pathological relations; but, although these relations are important and necessary sources of information to the legal student, yet as they contain merely a satisfactory digest of what is, or ought to be, well known to our medical readers, we cannot devote our pages to their consideration.

The next subjects at which we arrive, and which naturally enough arise out of the foregoing, are, *the legitimacy of children, supposititious children, tenant to the courtesy, of monsters and hermaphrodites*. These topics are first individually considered, in their legal relations; they afterwards become the subjects of physiological illustrations; and here the authors commence with the history of *conception and utero-gestation*. Of course, the phenomena characterizing and connected with these states, are familiar to our readers.

Parturition is the next matter of investigation; and under this head we have several questions of great import in law-medicine proposed for our consideration. The first of these is, "Whether a woman can be delivered during a state of insensibility, and remain unconscious of the event?" This question is answered by admitting the possibility of the occurrence, and by referring to two instances of the kind which are on record.—The second question—"How far the term of utero-gestation can be shortened, to be compatible with the life (*viabilité*) of the offspring?" and the following—"Whether to any, and to what probable extent, the natural term of utero-gestation can be protracted?"—have been answered in our review of Capuron * on Legal Medicine, as

* LONDON MEDICAL REPOSITORY, Numbers for January, February and March, 1823. See the Number of January, p. 63.

it relates to Midwifery. The views which our authors take of these subjects are similar to those which we have there entertained.

The fourth question proposed is — “What is the value of those signs by which we seek to establish the fact of a recent delivery?” Here we must refer our readers either to the work, where they will find this topic satisfactorily discussed, or to the review of Capuron* just noticed. We must also refer to the same sources for answers to the following queries: — “5. Are there any, and what diseases, whose effects may be mistaken for the traces of a recent delivery?” — “6. Can we determine by any signs whether a woman has ever borne a child, although at a period remote from that of the examination?” — “7. What are the earliest and latest periods of life, at which women are capable of child-bearing?” — “8. What is the possible number of children that can be produced at one birth?” These questions will readily be answered — as far as they can be answered, by our readers. The next, however, will not admit of so speedy a solution: — “Is superfœtation possible; and under what circumstances, and at what period of gestation, can a second conception take place?” The authors have bestowed considerable learning and research upon this subject. In answer to this much controverted point, they quote the opinion of Kannegeiser, with which they coincide: — “De superfœtationis existentia rationis quippe principiiis, atque infinitis hominum et brutorum exemplis abundè comprobato, medicis atque jurisconsultis mens vix amplius hæret in ambiguo.” They next refer to the case recorded by Dr. Maton in the fourth volume of the Transactions of the College of Physicians. This case was related to Dr. Maton by the husband of the lady, who may be considered to be the next person to a medical man capable of forming a correct opinion on the subject. In this instance, the one child was born nearly eleven weeks before the other, and lived nine days: now, although it was large and well formed, it may have been a six months’ child; and, consequently, the case has only proved the coexistence of separate ova in the womb; unless, indeed, we believe the husband’s opinion, that both fœtuses were full grown.

We gave, in that part of our preceding historical sketch which related to *midwifery*,† an account of a well-authenticated case, which may seem to some to support the affirmative of this much discussed question; but it, like the majority of instances of the same kind upon record, admits of more than one explanation; and it is even doubtful how far the

* See MEDICAL REPOSITORY for January 1823, p. 62.

† Ibid. for February 1823, p. 110.

explanation which we gave in that case, and which appeared to be the most obviously deducible from it, goes to support the occurrences which are essential to constitute a case of superfœtation in the opinion of the medical jurist.—We should bear in mind, what several physiologists have contended for, in the consideration of this topic, that, as instances of a double uterus are occasionally met with, so the phenomenon may be referred to such a conformation.

The authors next propose the following questions, which our readers will find no difficulty in answering:—"What are the causes of abortion?—Under what circumstances, and by what means, is it morally, legally, and medically proper, to induce premature labour?—What circumstances will justify the Cæsarian operation, and of what value is the section of the symphysis pubis, or Sigaultian operation?"

After some observations on *extra-uterine conception*, and respecting *hermaphrodites*, they next advance to the very important part of their work which relates to mental alienation.

The law of this country, as it respects *idiots and lunatics*, is first discussed at this place, after which, the acts that regard *lunatic asylums* are noticed. This latter subject is one which suggests abundant materials for speculation. There is, however, one consideration which is left us, namely, that it is possible for these establishments to be placed under worse superintendence than they are at present; and we so far coincide with the authors, as to consider the appointment of a permanent officer, in order to execute the duties now performed by the commissioners chosen by the College of Physicians, to be by no means a satisfactory provision; and as little do we think it just, that, in this country, and in the present advanced state of scientific knowledge, the choice of commissioners should be confined to one particular class of the Physicians of the metropolis.

"Medical and Physiological Illustrations of Insanity" follow the legal consideration of this topic. After an account of the different forms of insanity, the authors state the following questions, to which the attention of the medical witness should be directed during his intercourse with an insane patient:—

"1. Whether the person be actually insane? and what are the proofs of his derangement?"

"2. Whether the symptoms are of such a nature as to suffer the individual, with propriety, to retain his liberty, and enjoy his property?"

"3. Whether there has been any lucid interval, and of what duration?"

"4. Whether there is a probable chance of recovery; and in case of convalescence, whether the cure is likely to be permanent?" — I. p. 317.

It is obvious that we cannot, within our limits, enter into the authors' illustrations of these matters; we must, therefore, refer our readers to the work, or to former Volumes of the REPOSITORY, where they will find them discussed under reviews of the recent productions which treat of medical jurisprudence as it relates to insanity.*

We next arrive at a very interesting chapter respecting "*nuisances, legally, medically, and chemically considered.*" This subject is treated of under four distinct heads: the first embraces those nuisances, "during whose operation gaseous effluvia, the products of *putrefaction*, or *fermentation*, escape into the atmosphere, and are either noxious from their effects upon animals, or insufferable from the noisomeness of their smell." The *second* includes "those, where, by the *action of fire*, various principles are evolved, and diffused in the form of vapour or gas; the inhalation of which is not only disagreeable to the senses, but injurious to the health." The *third* relates to those which are capable of yielding waste liquids, that poison the neighbouring springs and streams: the *fourth*, those trades, whose pursuit is necessarily accompanied with great noises.

The authors devote a chapter to *impositions*, including under this head feigned diseases and the adulteration of food. On the former of these topics they observe, after stating the several objects, for the accomplishment of which persons are induced to simulate the existence of disease, that, whenever suspicions are excited with respect to the sincerity of a patient's account, the Practitioner should always endeavour to conceal them, and should become himself a dissembler; "for while the impostor is persuaded that the medical attendant is his dupe, he will be the less on his guard; he should then be desired to describe with minuteness every symptom and circumstance of his malady." Few impostors will be able to withstand such interrogatories, if properly put, without tripping. The authors illustrate this by a suitable example. "A girl of seventeen counterfeited epilepsy so

* See the reviews of *Dr. Haslam's* work on Medical Jurisprudence, as it relates to Insanity, in the LONDON MEDICAL REPOSITORY, Vol. IX. p. 473; — of *Dr. Male's* work on Forensic Medicine, in REPOSITORY, Vol. XII. pp. 415 and 503; — of *Dr. Burrows's* work on Insanity, in Vol. XIV. p. 467, of the REPOSITORY; — and of *Dr. Gordon Smith's* System of Forensic Medicine, in Vol. XVI. p. 211, of the REPOSITORY.

well in the general hospital at Montpellier, as to elude all suspicion; until M. de Sauvages, being less credulous, asked her whether she had not felt an air pass from the hand to the shoulder, and from the shoulder to the thigh, when, upon her replying in the affirmative, he ordered her to be whipped, after which she never had any return of the disease." The previous character, habits, constitution, and former complaints of the suspected person, should be taken into consideration; and the probable reasons which he may have for practising the deception. The circumstance of his taking the remedies ordered him with alacrity and regularity, or that of his neglecting the medicines provided for him, ought to have weight in the opinion which we may form. If these modes of investigation fail, others of a severer kind may be practised: such as, low diet, fasting, the affusions of cold water, blistering, the actual cautery, and, above all, a continued nausea from the administration of divided doses of tartarized antimony.

Insanity, somnolency, syncope, epilepsy, hysteria, shaking palsy, fever, dropsy, jaundice, hæmophthisis, vomiting of blood, bloody urine, incontinence of urine, gravel and stone, alvine concretions, abstinence from food, deafness and dumbness, blindness, ophthalmia, ulcers, hernia, are enumerated as the diseases more usually counterfeited, and they are individually considered in relation to the modes best calculated for their detection.

The law of this country, as respects policies of insurance on lives and survivorships, is clearly stated, at the conclusion of this part of the work, which, upon the whole, contains a very satisfactory view of the topics which it embraces; the notes are copious, and the illustrations classical and interesting. The medical reader will, with sufficient reason, consider some of the physiological illustrations unnecessary, and others too tedious; but the authors have addressed themselves equally to readers of the legal profession; and, therefore, they seem to have considered that many topics connected with that view of their subject ought, on this account, to be more fully developed than otherwise was requisite. Whether a similar idea will be entertained by readers belonging to this profession, with respect to the numerous cases which are quoted or referred to, we shall not pretend to say. The authors have doubtless felt, better than we can describe, the difficulties attendant on an attempt to satisfy, in a single work, however voluminous or well-executed, the wishes and expectations of the two learned bodies for which they have written—and, notwithstanding those difficulties, written so well: illustrations which are useful, and even necessary, to one class of

readers, are disregarded and thought superfluous by the other; and the very endeavours which are thus made to attain excellence and to meet the wishes of all, place the results beyond the reach of some, or render them unsuitable to the exigencies of others. This is, however, more frequently the fault of publishers than of authors; and in the present instance we attribute it to the former entirely. But we recommend the trade to remember the fable of the dog that saw his shadow in crossing a brook, and not to forget the moral — “quòd cupidus magis damno afficitur.”*

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

Observations sur quelques Cas de Développemens rapides des Tissus Accidentels. Par M. ANDRAL, Fils, Membre-Adjoint de l'Académie Royale de Médecine.

Observations on some Cases of rapid Development of the Adventitious Tissues. By M. ANDRAL, Jun. &c.†

ALTHOUGH the following cases are not of any interest in a therapeutical point of view, yet as tending to improve our knowledge of pathology, they are of very considerable importance. In general, the different adventitious tissues are slowly developed and characterized by symptoms of a chronic disease; occasionally, however, they spring up and increase with astonishing rapidity, and occasion an acute affection. The cases which we are about to relate were collected in the clinical ward of M. Lermnier at *La Charité*, by the same indefatigable observer whose excellent paper on the Pathological Anatomy of the Digestive Tube we communicated at length in our last Volume.

Case 1st. Cancer of the stomach terminating fatally thirty-seven days after the appearance of the first symptoms. — A man, aged forty years, was admitted into the Hospital *La Charité*, in the month of January, 1822, labouring under acute rheumatism. Although he had been subject for a long period to rheumatic pains, he enjoyed an excellent state of health: his digestive functions had never been deranged. Being convalescent at the end of a fortnight, he procured

* We are obliged to defer the review of the third part of this work, and other reviews with which we are in arrear, to our next and future Numbers.

† Archives Générales de Médecine, Juin 1823.

food beyond the quantity that was allowed him, which occasioned considerable dyspepsia. The following days the gastric symptoms continued, and indicated the invasion of a more serious disease: he vomited the emollient drinks and broths which were given to him: he complained of a pain at the epigastrium, which was so much exasperated at intervals as to compel him to cry out. The remainder of the abdomen was soft and indolent; the pulse accelerated; the skin hot and dry; the tongue of a natural appearance; the features of the face were considerably altered. The epigastrium was covered with leeches, and emollient and anodyne fomentations were applied. The symptoms, however, continued; and on the third day from their invasion, the patient had already fallen into a state of marasmus: he then began to experience frequent acid eructations. Towards the twenty-fifth day he vomited, for the first time, a great quantity of dark-coloured matter, similar to soot: this vomiting recurred on the following days: the pain at the epigastrium became more and more violent: the marasmus had soon reached its last stage: the pale face assumed a cadaverous appearance: the pulse acquired more and more frequency, and death took place on the thirty-seventh day. Blisters, applied both to the epigastrium and the pelvic extremities, were productive of no more advantage than the local blood-letting practised at the commencement.

Dissection.—From the internal surface of the stomach near the pylorus, a fungiform tumour projected of the size of an egg, presenting all the characters of the encephaloid tissue, in a soft state: at its base, the tumour implicated the parietes of the stomach, which, to the extent of five or six fingers' breadth in every direction, had acquired six or seven times their ordinary thickness. In certain parts these parietes consisted only of a bluish white tissue, covered with an infinite number of small cavities filled with a fluid of a gelatinous appearance—(scirrhus tissue in a crude and softened state.) In other places a dull white tissue was observable, furrowed by a multitude of reddish striæ, and excavated here and there by small sanguineous extravasations—(encephaloid tissue in a crude and softened state.)

The remainder of the mucous coat of the stomach was not sensibly altered. The other organs were healthy.

This case furnishes a very striking example of a cancer of the stomach, commencing, becoming developed, and terminating in death, in less than five weeks. A simple deviation in regimen appears to have been the occasional cause: the rapid increase of an adventitious tissue, the severity of the pain, the complete want of alimentation, sufficiently explain the intensity of the symptoms and the rapidity of the death. It is worthy of remark, that in this case no symptoms of typhoid fever were present. The tongue, in particular, was scarcely changed from its natural condition: this depended on the mucous membrane of the stomach being affected secondarily, the cancer having been primitively developed in the subjacent cellular tissue.

Case 2d. Cancerous tumour of the liver arising and terminating fatally in three weeks.—A foreign merchant, about forty-five years

of age, had several times been the subject of intermittent fever: he had enjoyed, however, from the age of forty, a perfect state of health. In the course of the month of April, 1820, he felt some slight pains immediately beneath the cartilaginous edge of the right false ribs: towards the end of this month symptoms of jaundice showed themselves: at this time he was admitted into *La Charité*. When we saw him, he had no fever: his appetite was very good, and the digestive functions appeared unaffected; except that, as in the majority of cases of jaundice, the stools were colourless, and the urine of an orange red: the right hypochondrium was soft and indolent. He was ordered whey, with acetate of potass, and calomel and soap in the form of pill. On the 2d of May, the pain in the right hypochondrium recurred, and continued on the following days: fever supervened, and the hypochondrium became tense, as if occupied by a tumefied liver. Leeches were applied to the hypochondrium.

On the 9th of May, we began to feel, immediately beneath the edge of the ribs, to the right of the epigastrium, a globular, immoveable tumour, which was very painful when slightly pressed upon. He was ordered a narcotic cataplasm.

From the 9th to the 15th, this tumour had acquired a considerable development: it became evident to the sight; and by the side of it several other small, unequal, and painful tumours soon manifested themselves.

From the 15th to the 20th, these tumours extended behind the cartilages of the ribs, which they forcibly raised up; at the same time, the patient began to vomit his drinks, three or four hours after having taken them: the fever was continued, with a violent exacerbation every evening, during which the pains in the hypochondrium became lancinating: the disease now proceeded with a terrifying rapidity: on the 20th he had reached the last stage of marasmus and debility: on the 21st he died.

Dissection.—The liver, which was large, passed beyond the edge of the ribs to the extent of four fingers' breadth. On its convex surface several tumours, formed by a mixture of encephaloid, scirrhous, and tuberculous tissues, still in a state of crudity, projected. These tumours extended somewhat deeply into the interior of the viscus: between them, the tissue of the liver was, however, perfectly sound.

Some tumours of the same nature surrounded and compressed the ductus hepaticus and ductus choledochus, as well as the pyloric extremity of the stomach.

It is, doubtless, possible that the tumours of the liver and of the gastro-hepatic omentum might have existed for many years. Observation proves, that similar tumours, so long as they are small, not numerous, and in a crude state, are not incompatible with the healthy state; but what we wish at present especially to notice, is the extreme rapidity of their increase, and the promptly fatal accidents resulting from them. The jaundice, in all probability, began to manifest itself at the period when the cancerous tumours, in becoming developed, compressed the biliary ducts; the vomitings, which super-

vened in the latter periods, are also naturally explained by the multiplication of these tumours around the pylorus.

Case 3d. Cancerous tumour of the great epiploon, developed and proving fatal in the space of five weeks. — An old soldier, aged fifty-one, entered into the Hospital *La Charité* in the course of the month of September, 1820; he complained of having felt, for eight days, somewhat severe pain around the umbilicus: there was some little fever: the stools were natural: the appearance of the tongue as in the ordinary state. The true nature of this pain it was difficult to discover. He was ordered *tisanes* and emollient fomentations, with low diet.

The next day, the 20th, the abdominal pain was more intense, and augmented on slight pressure: the face was altered; the pulse frequent and small. The inflammation of the peritoneum had become more evident. Thirty leeches were ordered to the abdomen. On the 21st, there was a sensible amelioration of the symptoms. On the 22d, tension of the abdomen, somewhat severe pain, obscure fluctuation. Thirty more leeches were applied.

On the following day, the abdominal pains had become moderated, and the fever was slight; but the abdomen became much tumefied: the fluctuation, however, was not manifest, and it was doubtful whether this rapid tumefaction might not depend on peritoneal effusion: the dull sound which the abdomen gave on percussion did not allow of its being referred to the development of flatus in the intestines. From the 30th of September, an irregularly rounded, very moveable tumour, was recognized, extending from the umbilicus to near the pubes. In the first days of the month of October, this tumour became more and more evident; and it could soon be traced into the right iliac region and into the flank of the same side: at this part it was extremely irregular on its surface, and was more painful than around the umbilicus. From the 15th to the 20th of October, the pain became violent: each morning we discovered the tumours sensibly increased in size since the preceding evening; they extended a little above the umbilicus and into the right flank. On the 20th, delirium and convulsions came on: he died in the course of the day.

Dissection. — The umbilical region, the two flanks, the hypogastrium, and both iliac fossæ, were occupied by a tumour attached, above, to the colic edge of the stomach, and concealed below by the os pubis, beneath which bone it extended.

Detached from the stomach, and turned downwards, the arch of the colon, to which it adhered; the small intestines, covered with membraniform exudations; the cæcum; and the two portions — ascending and descending — of the colon, might be successively observed.

The situation of this tumour, its direction, and its connexion, did not suffer us to doubt its belonging to the omentum. It was of a remarkable hardness, very thick, rugous, and knotty on its surface: when cut into, it presented to us, in many parts, a bluish white tissue, semi-transparent and gristly (scirrhus tissue in a crude state): in

other places there were small cavities, occasionally of a somewhat rounded form, sometimes oblong, and more or less anfractuous, filled with a gelatiniform liquid: the smallest of these cavities would have contained a pea; the largest a great almond (scirrhus tissue in a state of softening). Mixed with the preceding tissue, another of an opaque white colour was every where observable, in which blood-vessels ramified; these, in intersecting each other, left between them areolæ more or less irregular (encephaloid tissue in a crude state): in two or three points only, there existed a pultaceous, reddish substance, somewhat resembling the matter of the brain when in a state of incipient putrefaction, and stained with blood (encephaloid tissue in a state of softening). Finally, in some places the white colour of the preceding tissues was mixed with a tolerably deep brown tint, which probably indicated a commencement of melanosis.

In the midst of these different tissues, there were discovered also, in tolerably great number, the fatty substances which commonly exist in the healthy epiploon.

There are, I believe, but few facts in the annals of science resembling the preceding. In the space of less than five weeks, and at the end of a somewhat slight peritonitis, a cancerous tumour invaded the epiploon; acquired, each day, an increase sensible to the eye and to the touch; and at last finished by lining, in some measure, almost the whole of the anterior paries of the abdomen.

How are we to arrive at the cause of such a rapid development? Who is there that can explain, why, on the contrary, in other individuals, these same adventitious tissues form, in some years, a tumour scarcely the size of a nut?

In this individual, the intensity of the pain and of the fever, his frightful falling away, were in a direct ratio with the rapidity of the development of the adventitious tissues. In the following case, which is an example of a tumour, the increase of which was still more rapid, we observed, on the contrary, neither pain nor fever; the strength also, it will be seen, kept up very well: in both, however, it was in the epiploon, and after peritonitis, that the tumour developed itself: this difference of the symptoms, however, may perhaps be explained by the difference of the tissues produced. In the third case it was a cancerous tissue; in the subject of the fourth the tumour was formed by the tuberculous tissue.

Case 4th. Tuberculous tumour of the epiploon developed and arriving at an enormous volume in fourteen days.—A taylor, aged twenty years, of a lymphatic temperament, worked and slept, during the months of January and February, 1822, on a very damp ground-floor. Towards the middle of February, he perceived that his belly acquired an unusual size; he did not experience, however, any abdominal pain: at the same time there was emaciation of the limbs and face. Towards the commencement of the month of March, he had a copious diarrhœa: abdominal pain increased on pressure; loss of appetite; and prostration of strength. During the month of March, the diarrhœa appeared and disappeared several times; the

size of the abdomen augmented. In the commencement of the month of April, he was admitted into *La Charité*, presenting the following state: —

Face pale; emaciation of the limbs; abdomen large — painful only on somewhat strong pressure; evident fluctuation; one liquid stool only in the twenty-four hours for several days; apyrexia; respiration free.

The ascites was regarded by M. Lermnier as the result of a latent inflammation of the peritoneum. To remove the phlegmasia, and endeavour, at the same time, to procure the absorption of the effused fluid, were the indications to be fulfilled. From the 7th to the 16th of April, 120 leeches were applied to the abdomen or to the anus; bleeding to two cups (3viij.); emollient fomentations; barley-water, with nitre; Dover's powder given as a diaphoretic, in the dose of twenty-four grains in four powders, in the twenty-four hours; broth.

Under the influence of this treatment, the ascites diminished; the urine became more abundant and clear: the skin was only once in a moist state.

On the 20th, no more fluctuation could be felt; but on pressing the abdomen, the convolutions of the small intestines, aggregated together into one mass, could be easily recognized; so that the diagnosis had been correct. The patient, in other respects, felt himself well; and notwithstanding the loss of blood which he had sustained, he declared that he felt stronger and more active than at the time of his admission.

Nothing particular occurred during the month of April. In the commencement of May, he walked in the garden of the hospital. The abdomen, when strongly pressed upon, was slightly painful.

On the 7th of May, the whole of the abdomen was covered with a large mercurial plaster.

Until the 21st, the state of the patient seemed to remain stationary: he did not complain of any unusual pain in the abdomen; he continued to get up and walk about; fever, however, did not occur. What was our astonishment, when, on the 21st, fourteen days only after the application of the plaster, we found, on raising it up, in the situation of the intestinal convolutions, a bulky tumour, occupying the umbilicus, the lower part of the epigastrium, the left flank, the hypochondrium of the same side, and which seemed to extend behind the left false ribs! This disposition gave to the tumour a considerable analogy to enlarged spleen. There was no cause, however, which could account for such a rapid development of the spleen; on the contrary, we knew that the great omentum may quickly acquire an enormous bulk. We knew that, when unequally developed in its different parts, it may form tumours which have often put on the appearance of tumours of the liver, spleen, kidneys, and even of the uterus. Finally, the absence of fever did not seem to invalidate our diagnosis, as in this individual an extensive peritonitis had also developed itself, without pain and without fever.

The patient, however, persuaded that he was convalescent, was desirous of quitting the hospital on the 1st of June.

On the 2d of August, he returned in the most deplorable condition: after his exit, symptoms of phthisis pulmonalis had declared themselves. The abdominal tumour had considerably augmented: it was hard, and covered with a considerable number of lumps. He died four days after his admission.

Dissection. — The great omentum had acquired eight or ten times its ordinary thickness. This augmentation of thickness was owing to large tuberculous masses developed between the laminae of the epiploon: several had begun to become softened. The major part of the mesenteric ganglions were also tuberculous. Behind the epiploon, the small intestines were united together by false membranes, in the substance of which enormous tubercles were equally developed. Large tuberculous excavations were found in both lungs: the other viscera were healthy.

Let us recapitulate, in a few words, the different stages or periods of this interesting disease.

First period. — Development of peritonitis, without pain and without fever.

Second period. — Ascites, result of the peritonitis: disappearance of the serous effusion under the influence of copious blood-letting.

Third period. — Organization of the albuminous flakes, which, not being absorbed like the serum, became transformed into false membranes. Adhesion of the intestines, readily distinguishable through the abdominal parietes.

Fourth period. — Very rapid formation (in fourteen days) of the tuberculous tumour of the epiploon, notwithstanding his excellent general state of health, his feeling well, the restoration of the strength, and the complete absence of fever! The patient left the hospital in this state: he no longer observed any regimen; and under the influence of the irritating causes to which he was submitted, the process of tuberculization in the peritoneum augmented: it extended to the lungs: hectic fever declared itself, and he was rapidly dragged to the grave.

When this young man quitted the hospital, no symptom indicated that the lungs were diseased; and yet, in less than two months, pulmonary tubercles broke out, became multiplied, softened, and formed extensive excavations.

In the following histories, divers cases of pulmonary phthisis will be observed, which had also a very acute progress.

Acute phthisis pulmonalis. — Acute phthisis pulmonalis has already been described by several authors. Morton has spoken of it, and Portal has cited, in his treatise on phthisis pulmonalis, the case of a young girl of thirteen years of age, who died of a tuberculous consumption of the lungs in the space of thirty days.

These acute consumptions present, in their symptoms, great varieties, which are important to be known as regards the diagnosis.

In several patients, the rapid development of pulmonary tubercles is not announced by any local symptom. The cough is slight; the expectoration wanting or purely catarrhal; the respiration does not appear impeded: if the chest be struck, it will be discovered to be

every where very sonorous; if auscultation be practised, the respiration is heard every where, as in health. There exists, however, a continued fever, with abundant nocturnal sweats; a rapid emaciation takes place, and the patients, arriving in a very short space of time at the last degree of marasmus, frequently die without the derangement of the lungs having been more equally manifested. *Dissection* shows a great number of small crude tubercles developed in the parenchyma of the lungs. The very healthy state of this last part explains why percussion and auscultation gave no signs of disease. The rapid multiplication of the tubercles sufficiently accounts both for the fever, the wasting away, and the speedy death.

In other patients, acute phthisis is announced by truly local symptoms; but such symptoms are not those which commonly characterise the presence of tubercles in the lungs. We have seen individuals who, after having for a long time experienced a very slight cough, were suddenly seized with a violent shivering, followed by very severe continued fever, with oppression and sometimes acute pain in some part of the thorax, particularly beneath one of the clavicles. These symptoms are, in fact, partly those of pneumonia or pleurisy.

Amongst the individuals who have been presented before us, some have died in a very short time, when we have discovered, either at the top of the lung, or at its centre, a large softened tuberculous mass, not yet, however, communicating with the bronchiae. It is probable that in these subjects the tuberculous mass had already existed for a long time in a state of crudity. On its becoming soft depended the acuteness of the symptoms. In other individuals, the same accidents, after having at first appeared with equal intensity, became mitigated, and the phthisis subsequently pursued its ordinary course.

We have seen cases where the rapid development of the granular phthisis of Bayle has been only announced by a suffocation, to a greater or less extent, by a sort of acute asthma.

The following case, which was communicated to me by Dr. Thibert, is a case of this sort.

Case 5th. Acute granular phthisis, terminating fatally in less than thirty days.—A student of medicine, usually enjoying good health, was attacked, towards the middle of the month of March, 1822, with slight dyspnoea, and some symptoms of plethora. Soon after this, diarrhoea occurred, which ceased at the end of some days; but there was increase of the dyspnoea and fulness of pulse: he took violent exercise, with the intent of diminishing the plethora, to which his unpleasant feelings were referred.

On the 29th of March, and the following days, hæmoptysis: afterwards fever, cough, orthopnoea, by no means in proportion to the trifling degree of pulmonary catarrh: pulsation of the heart strong and full: leeches were applied to the anus on the 3d of April: cessation of hæmoptysis on the 4th: increase of oppression: lips violet-coloured. From the 4th to the 10th of April, the major part of the patient's symptoms were those of diseased heart: he died in the state of suffocation which usually characterizes that species of

affection. The numerous evacuations of blood, the depletions to which we had recourse, only afforded momentary relief.

No other lesion was discoverable than some *miliary granulations*, developed in an innumerable quantity, in both lungs, and surrounded by a tissue perfectly crepitant.

Thirty days did not intervene in this case between the time of the manifestation of the first morbid symptoms and of death. It seems that the extreme rapidity with which the granulations became developed, did not suffer the lung to become, in some measure, habituated to their presence. Hence the dyspnoea, the intensity of which always increasing, finally produced death by asphyxia. It is on this account that there is a very great difference, as regards the general and local symptoms, between a pleuritic effusion, the increase of which has taken place slowly, and that which, although less considerable, has been effected more rapidly. It is thus also that in consumptive individuals, the greatest part of whose pulmonary tissue has become impermeable to the air, the respiration is, notwithstanding, much less troubled than in those who, attacked with acute pneumonia, have but a small part of one or both lungs hepatized.

Finally, in other cases, phthisis pulmonalis shows itself with its accustomed symptoms; but those succeed each other with a frightful rapidity.

Case 6th. Acute tubercular phthisis, terminating fatally in three weeks.—A young man was received into *La Charité* with symptoms of slight enteritis, which quickly yielded to regimen and the use of diluents. Until that period he had presented no symptom which could give any suspicion of the existence of pulmonary tubercles. When on the point of quitting the hospital, he took cold: at the end of some days, fever, emaciation, and alteration of the features, supervened. Three weeks after the appearance of the cough, he had colliquative sweats; the last stage of marasmus; purulent expectoration; evident disease of the lungs, as indicated by the stethoscope below the right clavicle. He died in the fourth week. An enormous excavation was found in the upper lobe of the right lung.

Case 7th. Acute tubercular phthisis, terminating fatally at the end of five weeks.—A jeweller, aged eighteen years, had enjoyed good health until the commencement of the month of March, 1832. Before this period he had never had either cough or spitting of blood, or difficulty in breathing: sometimes, however, he had felt a pain between the left clavicle and the breast of the same side.

Towards the 6th of March, he took cold; towards the 15th of the same month, oppression; great diminution of strength; recurrence of the pain beneath the left clavicle; a great number of leeches were applied over this part, and a blister to the arm. The state of the patient, however, became each day aggravated; he was admitted into *La Charité* on the 1st of April. At this period hectic fever, well characterized; purulent sputa; very strong gurgling in all the anterior part of the left side of the thorax; diarrhoea for several days: he was ordered mucilaginous remedies. On the 16th of April

he died, about five weeks after the appearance of cough. Numerous tubercular excavations filled the left lung.

Case 8th. Pulmonary tubercles becoming softened, and terminating in death, in eleven days, after having only been attended for several years by symptoms of the first stage of phthisis.—A man, aged thirty years, presented merely, at the time of his admission into the hospital, the symptoms of a somewhat intense pulmonary catarrh. From the age of twenty-five years, however, he had experienced several slight attacks of hæmoptysis; there was no fever, and he was in tolerable health. Auscultation and percussion, during the first ten days, afforded us no instruction; at the end of that period he expectorated, for the first time, streaked sputa, which appeared to us furnished by a mixture of tuberculous matter and mucus. By auscultation we discovered a strong gurgling under the right clavicle; so that since the previous day, a softened tubercle appeared to have broken into the bronchiæ. The next day the characteristic expectoration was abundant; and pectoriloquism, which had replaced the gurgling, announced that the cavity was partly empty. During the eight following days, we heard successively, in several parts, a sound, and above the principal cavity, a gurgling, which pointed out to us the softening of other tubercles, and their communication either with the bronchial tubes, or with the first cavity. The patient, however, who, until this time, had preserved his *embonpoint*, and his strength, fell away with a frightful rapidity, and died eleven days after the appearance of the streaked sputa. We discovered, at the top of the left lung, a large cavity, into which a great number of small anfractuous cavities had just opened.

To this picture of acute phthisis pulmonalis we might oppose that of others, remarkable for the extreme slowness of their progress, and the mildness of their symptoms.

Thus we have proved, by necroscopy, the existence of phthisis pulmonalis in an old man of seventy-six, who, for many years, had coughed and frequently spit blood.

In the individual who forms the subject of the following case, there existed a striking want of agreement between the symptoms and the intensity of the pulmonary lesion.

Case 9th. Cavity announced by auscultation in an individual who seemed to be merely in the first stage of phthisis.—A locksmith, aged forty years, presented, for nearly eighteen months, the following symptoms: slight hæmoptysis every now and then, cough somewhat intense; breathing a little short; preservation of his healthy appearance; absence of sweats. This man never left off his laborious employment; he even followed it until the evening before his admission into the hospital. At that time he was attacked with fever. When we saw him, we discovered, by auscultation, that there existed beneath one of the clavicles a cavity; in this part there was a well-marked gurgling noise.

On the 12th day after his admission, we could only hear a very slight gurgling beneath the clavicle: after that, we were no longer able to distinguish it. But in this same part the very strong

respiration imitated the sound made by a pair of bellows. The patient coughed much less, breathed freely, and had no more fever. It was not long before he was discharged.

It is presumable that in this patient, a tuberculous mass, existing at the top of one of the lungs, had broken down and given place, by its evacuation through the bronchiæ, to the characteristic expectoration which we observed on the first day. It was during this process of breaking down that fever supervened, and the cough became more violent. It was at this time that we heard the gurgling. The noise like that of the bellows, which was heard later on, indicated the entrance of the air into an empty cavity.

The utility of auscultation in such a case cannot be denied. Without it, could we have even suspected the existence of a cavity in the lung of a man, who had only given up his employment a few days before, and who, after a short stay in the hospital, felt himself sufficiently strong to resume his trade of locksmith?

The scirrhus, encephaloid, and tuberculous, are not the only tissues which we have seen take on an acute march in their development. We have observed also cartilaginous and osseous incrustations invade, with equal rapidity, the mitral and aortic valves: hence the symptoms of a truly acute aneurism of the heart.

In another article we shall communicate some cases of this kind

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

I. On the Presence of the *Hydro-Cyanate of Iron* in Urine. By Dr. JULIA.

A gentleman of the sanguine temperament, aged eighty-two, was attacked with an acute disease of the urinary passages. He had previously enjoyed perfect health. The urine which he evacuated on the second day of his disease was of a deep blue colour; it frothed on agitation, was glutinous, and deposited filaments of the same blue colour. Dr. Sernin, who attended this gentleman, being desirous to learn the cause of this colour, sent the urine which the patient evacuated on waking in the morning to M. Julia, for the purpose of analysis. This chemist ascertained, 1st, that this urine contained very little urea; 2d, that it was charged with albumen and gelatin; 3d, that the blue colour arose from the presence of the hydro-cyanate of iron, probably in the form of a triple salt with soda. It remains to discover the cause to which this salt was indebted for its solubility in the urine. M. Julia does not pretend to explain this phenomenon; He rests satisfied with stating the fact.—*Archiv. Gen. Mai 1843.*

II. *On the Efficacy of the Injection of the Volatile Alkali in suppressed Menstruation.* By Dr. LAVAGNA, jun.

M. Lavagna has published fourteen cases of amenorrhœa, in which injections into the vagina, with ten or twelve drops of this alkali in two spoonfuls of warm milk, and repeated several times in the day, have uniformly procured a return of the menstrual flux in the space of five or six days at the farthest, and sometimes at the end of twenty-four hours. M. L. informs us that it uniformly caused all the concomitant symptoms in the obstructed state to disappear, and was equally successful in every habit of body, and in every temperament and constitution. He observes, that in general this injection produced a more or less disagreeable, and sometimes even a painful sensation in the vagina, according to the relation existing between the quantity of the alkali and the sensibility of the parts; but in no instance did he observe any unpleasant effects from its use.—*Annali Universali di Medicina, Milano, 1823.*

III. *Case in which blue Urine was voided during Enteritis.*

M. Jules Cloquet gave an account, at one of the late sittings of the Royal Academy of Medicine at Paris, of a child, thirteen years old, that discharged, for three successive days, during the worst stage of enteritis, urine of a pure blue colour, depositing a sediment of the same colour, and giving a fine indigo colour to paper immersed in it. The urine was sent to M. Pelletan, for the purpose of analysis. A member of the Academy saw a similar appearance of the urine in a patient afflicted with the acute rheumatism.—*Rev. Med. July, 1823.*

IV. *On the Treatment of the Bite of the Viper.*

Professor Paletta, of Milan, in several cases of injury inflicted by the *coluber berus* of Pleuk, wherein the patients were nearly moribund, from sinking of the vital energy, employed external warmth, wine in small doses and frequently repeated, a diaphoretic tisan with the volatile alkali, and the external application of the same alkali to the bitten part, with complete success in every instance.—*Annali Universali di Med.*

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

Anatomical and Physiological Commentaries. By Herbert Mayo, Surgeon and Lecturer in Anatomy. Number II. July 1823. Pp. 141, with seven lithographic plates.

This and the former numbers of Mr. Mayo's commentaries contain a condensed translation of Reil's essays on the Structure of the Brain. Mr. M. has accompanied his translation with numerous engravings and references—the whole cannot fail of being most acceptable to the anatomical student. Mr. Mayo concludes this part of his commentaries with some interesting remarks upon the spinal chord and the nervous system generally. The other commentaries which this number contains, are—on the cerebral nerves, with reference to sensation and voluntary motion; on the structure of horn, hoof, and cuticle; on local action; remarks in defence of the Hunterian theory of absorption; and an examination of a body soon after parturition: these original articles will come under notice on a future occasion.

FOREIGN.

Petit Manuel d'Anatomie Descriptive; ou, Description Succincte de Tous les Organes de l'Homme. Par A. L. J. Bayle, D. M. P. Prix 5 fr. Paris, 1823. Gabon and Co.

This little manual is written with great care and method, and must be of considerable use to the advanced student or practitioner, for the purpose of

recalling to his mind the important points of anatomical science which may have escaped his memory.

WORKS RECEIVED FOR REVIEW.

I. Lectures on the Operative Surgery of the Eye: being the Substance of that part of the Author's Course of Lectures on the Principles and Practice of Surgery which relates to the Diseases of that Organ: published for the purpose of assisting in bringing the Management of these Complaints within the principles which regulate the Practice of Surgery in general. By G. J. Guthrie, Deputy Inspector of Hospitals, Surgeon to the Royal Westminster Infirmary for Diseases of the Eye, &c. &c. 8vo. with Plates. Pp. xxvii. 517. Burgess and Hill. London, 1823.

II. Anatomical and Physiological Commentaries. By Herbert Mayo, Surgeon and Lecturer on Anatomy. No. II. July 1823. With Plates, 8vo. Pp. 141. Underwoods. 1823.

III. Anatomical Diagrams of Obstruse Parts of the Human Body. No. I. By G. D. Dermott, M.R.C.S. 4to. Burgess and Hill. London, 1823.

LITERARY INTELLIGENCE.

In the press, and speedily will be published, a Translation of "*Magendie's Formulaire pour la Préparation et l'Emploi de plusieurs Nouveaux Médicaments,*" with copious Notes, and an Introduction. By Mr. Haden, Surgeon to the Chelsea and Brompton Dispensary.

Preparing for publication, Outlines of Midwifery; developing its Principles and Practice. By J. T. Conquest, M.D. F.L.S. Member of the Royal College of Physicians, &c. &c. The Third Edition, enlarged, &c. &c.

Dr. Power has in great forwardness a Second Edition of his *Treatise on Midwifery*; the whole comprising material alterations and additions.

The Second Edition of Mr. Goodwin's *New System of Shoeing Horses* is in preparation for the press, and will speedily be published in 8vo. containing many and important additions.

NOTICE OF LECTURES.

Mr. Curtis will commence his next Course of Lectures on the Anatomy, Physiology, and Diseases of the Ear, on the 1st October.

Quarterly Report of Prices of SUBSTANCES employed in PHARMACY.

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Guaiaci resina	9	6	Rhæi Radix (East India) opt.	10	0
Hydrargyrum purificatum	5	6	Rosæ petala	7	0
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— cum creta	4	6	Sarsaparillæ Radix (Jam)	5	0
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THE METEOROLOGICAL JOURNAL,

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21			66	69	62	29	50	29	44	80	75	SSE	WSW	Clo.	Rain
22		.05	61	67	55	29	63	29	70	74	74	WSW	WSW	Fine	Sho.
23	●	.05	60	65	58	29	50	29	23	82	85	S	SW	Rain	Rain
24		.22	58	67	53	29	50	29	65	75	80	W	WSW	Clo.	Fine
25			57	65	56	29	64	29	50	71	85	SW	SSE	Clo.	Fine
26			55	65	54	29	43	29	54	89	74	W	NW	Rain	Sho.
27		.40	55	66	53	29	60	29	71	70	75	W	W	Clo.	Fine
28			55	67	54	29	68	29	65	85	80	S	S	Rain	Fair
29		.12	59	64	54	29	63	29	58	87	88	SW	SW	Sho.	Sho.
30	☾		60	67	57	29	60	29	63	79	80	SW	WSW	Fine	Fine
31		.03	60	69	55	29	70	29	85	75	76	SW	WSW	—	Rain
1			59	68	60	29	90	29	77	77	80	SSW	SSW	Clo.	—
2			59	70	58	29	81	29	80	75	77	S	SW	Rain	—
3		.03	62	67	59	29	65	29	55	87	80	S	SSW	Ovc.	Rain
4		.30	64	69	68	29	50	29	62	76	77	SSW	SW	Fine	Fine
5			65	67	65	29	62	29	63	72	75	SW	SW	Sho.	—
6	☾	.02	64	66	63	29	60	29	60	72	71	SW	SSW	—	—
7			60	64	57	29	70	29	64	72	74	SW	S	—	—
8			58	64	51	29	60	29	62	82	73	SW	W	Rain	—
9		.15	55	61	48	29	72	29	86	75	76	WSW	W	Fine	—
10		.10	56	63	49	29	93	29	86	89	100	SSW	SSW	Rain	Rain
11		.11	60	65	58	29	83	29	80	95	94	SW	SSW	Clo.	Clo.
12			60	75	62	29	73	29	66	73	75	SSW	S	Fine	Fine
13	☾		65	76	60	29	50	29	54	72	75	SW	SSW	—	—
14			64	74	57	29	63	29	65	74	73	WSW	SW	—	l. ra.
15		.04	60	74	49	29	64	29	50	72	76	SSW	WSW	—	—
16			57	65	49	29	37	29	49	80	77	S	SW	Sho.	Sho.
17		.22	60	63	48	29	64	29	74	65	76	WSW	S	Fine	Clo.
18			58	64	49	29	71	29	66	75	95	ESE	S	Clo.	—
19			64	67	49	29	62	29	64	92	94	SSW	SSW	—	Rain

The quantity of Rain that fell in the month of July was 2 in. 37-100ths.

NOTICE TO CORRESPONDENTS.

Communications have been received from Mr. Ward, Mr. King, and Mr. Blackett: these, as well as others which have been acknowledged, will be published in our earliest Numbers.

. Communications are requested to be addressed (post paid) to Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

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LONDON MEDICAL
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PART I.
—
ORIGINAL COMMUNICATIONS.

I.

Observations in Practical Pathology, No. IX.—Illustrations of Rupture in the Vena Cava, with Cases and disquisitive Remarks. By JAMES KENNEDY, M.D. of Glasgow.

RUPTURE* of the vena cava is one of those fatal lesions to which, from their ultimate effects being instantaneous, their situation inaccessible, and their diagnostic symptoms uncertain, the resources of therapeutic science will never be successfully opposed. Nevertheless, as a contribution to the anatomy of morbid structure, it may not be unprofitable to detail the circumstances of two cases of this kind—one of the thoracic and another of the abdominal vena cava—which at different periods have come under my observation. At the same time, and with the object of making the REPOSITORY a repository of the principal facts which distinguish this irremediable accident, it is proposed to collect, in the form of analytical gleanings, such instances of its occur-

* RUPTURE. — This epithet, in defect of one more appropriate, is employed throughout the present essay to denote any opening of the vena cava which permits sudden extravasation of the sanguineous fluid, whether the lesion be consummated by perforation, erosion, or laceration of the vessels' tubular coats. — K.

rence as are scattered over the pages of pathological history. My inducement to extend, in this manner, the object of the present sketch beyond a detail of two particular cases, has arisen out of the circumstance of rupture of the vena cava having hitherto passed nearly unnoticed by the cultivators of British medical science: — it has obtained no description in Dr. Baillie's excellent work * on Morbid Anatomy, and is only cursorily noticed in Mr. Hodgson's treatise † on the Diseases of the Heart and Vascular Systems, where a condensed review of one of Portal's sketches stands alone (p. 520), in testimony of the author's acquaintance with such injuries of this important vein.

There might be advantage in distributing these observations under a twofold classification — those which illustrate rupture of the vena cava without complication, and those wherein there had been rupture of that vessel accompanied with other modifications of organic disease. As the essay, however, is more distinguished by an historical than a practical character, a chronological arrangement of the facts has been preferred. This, therefore, gives occasion to begin with the doctrines of Aretæus, whose *heroic* practice in acute maladies was altogether original and excellent, and will bear, without eclipse, a comparison with that inculcated by the highest authority in modern times.

I. Aretæus has particularized rupture of the vena cava ‡ as a fact familiar to his knowledge, and an object of his own observation. He regards this and every other vein as being susceptible of becoming the seat of all kinds of acute and violent diseases. His symptomatology, indeed, and management of the phlebotic state, have not been improved by the latest and best writers on venous inflammation. With characteristic, but elegant conciseness, he describes certain affections of the vein denominated *kedmata*, || in which san-

* The Morbid Anatomy of some of the most important Parts of the Human Body. By Matthew Baillie, M.D. F.R.S. L. & E. and F.R.C.P.L. 8vo. Third edition. London, 1807.

† A Treatise on the Diseases of Arteries and Veins; containing the Pathology and Treatment of Aneurisms and Wounded Arteries. By Joseph Hodgson, F.R.C.L. 8vo. London, 1815.

‡ ΑΡΕΤΑΙΟΥ ΚΑΠΠΑΔΟΚΟΥ Περὶ Αιτίων καὶ Σημείων Οξείων καὶ Χρόνιων Παθῶν, ΚΕΦ. η. Περὶ τῆς κατὰ τὴν Κοίλῃ Φλέβας ῥήξεως μέσον. Curâ Hermannî Boerhaave, M.D. Folio. Lugd. Bat. 1735. P. 20.

|| *Κέδματα* appears to me to be a term almost, if not altogether, peculiar to Grecian pathology. Its etymology and determinate signification are involved in much obscurity. On the former it is not for me to speculate; and I willingly resign it as an object of research to others more conversant than myself with the niceties of Hellenic

guineous effusion, from rupture of the vessel, occasions sudden death. When the rupture has place within the thorax, the blood gets into the lungs, and is evacuated by the wind-pipe and mouth: when it occurs in the abdomen, and near the vessel's origin (in primeval anatomy, "*της μεν γαρ φλεβος ριζωσις ηπαρ*, the root of the vena cava is the liver"), the extravasated fluid enters the alimentary canal and fills its tube, without being seen.

Morgagni, who was more conversant with the intricacies of anatomical research than with the subtleties of philology, declines examining whether Aretæus, by the term *kedmata*, had reference to dilatation of the vein from obstruction of the blood's course, or to some other form of vascular disease. He admits, however, that the Cappadocian Physician does *speak* of the rupture of this vessel, but regards the statement as a conjecture rather than an inductive doctrine. Now this is not altogether fair; for, when a reputable author pronounces any circumstance to be a fact, we ought surely to allow him credit for having known it to be a fact, from whatever source, or by whatever mode of investigation, that knowledge may have been derived. The following is not the language of conjecture: — "*εὐτε γηγνυμενη αιμορραγία ἀμιστα κτείνει*" — *quando sanguinis, ex ejus (venæ cavæ) ruptione, profusio citissimè mortem infert* — hemorrhage from rupture of the vena cava produces instant death."

The illustrious Pavian anatomist also finds difficulty in accounting for the blood, in case of the thoracic vena cava being ruptured, escaping through the lungs, the trachea, and the mouth. "*Non apparet via*," he says,* "*per quam ex illâ*

literature. The latter promises more congenial matter for disquisition; but a foot-note is not the place for discussing subjects of such intricacy. When Hippocrates employs the word, I understand him as implying reference, *generally*, to a strumous condition of the joints and inguinal glands, and, *particularly*, to some modification of the ischiadic disease. Aretæus extends its application: he describes, with laconic preciseness, the ultimate effects of *κιδματα* on vascular structure. With each of these venerable personages, the *kedmatous* state seems to be one of disorganization consecutive to a *defluxion of acrid humours on the part*, exciting inflammation, with its natural results — suppuration, ulceration, erosion. In the text, we find it recognized as being precursory to disruption of a venous tube. The reader will perhaps see testimony favourable to this understanding of the word *κιδματα* in Epist. LIII. art. 37, of Morgagni's unrivalled work, and in the observations of Puerarius, Dolæus, Brown, Lancisi, De Haen, Doubleday, and Portal, as they are exhibited in the present essay.

* Epist. XXVI. art. 28.

disruptâ sanguinem in pulmones asperamque, unde effluit, arteriam deducat—it is not evident how the blood from that ruptured vessel should find its way into the lungs and trachea, out of which it flows.” My own mind, at least, is satisfied that Aretæus, on this occasion, is describing rupture of the vena cava consequent to *kedmata*, or ulcerative erosion of that vessel. Now, such erosion may either commence in the vein itself or in the contiguous structures, and be completed by the usual processes of textural disorganization. There is not, indeed, a large space of the vein exposed to be brought into this kind of morbid relation with the organs of respiration; but when we know that more than two inches of the vena cava superior, and nearly an inch and a half of the inferior, stand in near apposition to a corresponding portion of the lung, we shall not find difficulty in admitting the possibility of inflammation, adhesion, and ulceration, extending their ravages from a small point of the vein or lung, so as to implicate many of the surrounding parts. By this means, whether the disease originates in the vascular or pulmonary organ, erosion of either or of both may be effected; and the necessary result of such a lesion must be a rapid extravasation of blood into the air-cells of the lung, and its ultimate effusion through the wind-pipe, determining the patient's death.

II. Jac. Sylvius* dissected a person who fell from a height. On the abdomen being opened, a great quantity of blood flowed out, which had been effused from a rupture of the vena cava. The liver was large, pale, tender, and fragile, like one that had been boiled.

III. Marcellus Donatus† quotes a case, from Amatus Lusitanus, of a man who, “*ex frequenti uxoris super se in re venerea decubitu, quæ corpulenti et vasti corporis erat, in*

* This case is quoted from Bonet (III. p. 731), who mentions it. I have referred to the Basil edition of the works of Sylvius, but I have not been able to find it by the assistance of its imperfect index; and his works are too voluminous and too diffuse for a deliberate research within the period to which my avocations confine me.

† This case is also quoted by Bonet (III. p. 371). Morgagni (Vol. II. p. 281), however, says he cannot find it in any of the works of Amatus. I have examined the works of Amatus Lusitanus, and am also unable to find it; but, on referring again to Donatus, from whom the above case, with the cause of its supervention, is taken, it seems evident that it is not quoted from any of the common editions of his works, but from a contribution to some one of the academical collection of papers which were published about the middle or conclusion of the sixteenth century.

venæ cavæ rupturam incidit, et derepentè omni sanguine extravenato, mortuus fuit.*

Joannes Riolanus† presents us with the following remark, which shows that rupture of this vessel had fallen under his observation:—"Aretæus writes that the vena cava is susceptible of inflammation, and by this cause of suffering disruption. This I have seen happen. The trunk of the vena cava cannot sustain dilatation so long as the circulation of the blood is unobstructed; nor is it affected with varices, as is often the case with the veins of the lower extremities."

IV. Exclusively of its importance as a pathological report, the following case will obtain consideration from the circumstance of VESALIUS having been consulted on the treatment, and pronounced an opinion on the nature of the disease, which the dissection in all respects confirmed. Two histories of it are on record—one by Adolphus Occo,‡ the patient's original attendant; the other by John Udalric Rumler,|| whose co-operation was required. From the latter the symptomatology is taken: the former is preferred for its description of the appearances after death. Achilles Gassar§ made the necrotomy.

Leonard Welser, a gentleman of Augsburg, sustained a violent concussion in managing a restive horse, and in consequence became ill of an obstinate malady, distinguished in chief by excruciating pain in the dorsal region. On its resisting all the medicines exhibited by his Physicians, the advice of Vesalius, who then taught anatomy at Brussels, was solicited. This illustrious man instantly recognised the manifestations of aortal aneurism, and foretold its fatal issue. Immediately on discovering a small tumour pulsating from under the dorsal spine, he declared it to be an aneurism from dilatation of the aortal artery; and that being produced by concussion, it was incurable. At the same time, he stated, that he had seen such a disease in the neck, the chest, the ham, and the arm—that it always occasions excruciating

* Marcelli Donati Hist. Med. Mirab.; opus variâ lectione resectum. 4to. Venetiis, 1597. Lib. IV. cap. ix. p. 125.

† Encheiridium Anatomicum et Pathologicum à Joanne Riolano, Filio. 8vo. Lugd. Batav. 1649. Lib. II. cap. xxvii. p. 143.

‡ Adolphus Occo: Epistola Medica; extat in Libro Consiliorum Medicinalium singulare quem edidit Laurentius Scholzius. Folio. Francofurti, 1598.

|| Johannes Udalricus Rumlerus: Miscellanea, Observationes, Consilia Medicinalia, et Epistolæ. Obs. 31. 4to. Ulmæ, 1676.

§ Achilles Pirminius Gassar: Collectanea Practica et Experimenta Propria. 4to. Ulmæ, 1676.

distress, and, in the end, *sideration** — that it is irremediable, unless *the part can be excised* — that these aneurisms frequently contain a concrete fluid resembling ice or the crystalline humour, sometimes coagulated blood, or (“*molam*”) a polypous substance — that, during life, the aneurismal blood remains fluid; after death, it is black and *siderated* — that the patients die, suffering exquisite pain — and that sometimes vascular dilatations form spontaneously; sometimes they are determined by an exciting cause, as in the present instance.

Getting impatient under his distresses, which had resisted all sorts of medicine during two years, the sufferer ultimately threw himself into the hands of an empiric, who administered certain internal remedies (“*catapotia*” pills), the use of which was soon followed by sanguineous expectoration and an abrupt decease.

Dissection. June 1557. — Most of the abdominal organs were sound; the liver greatly enlarged, but otherwise natural. The spleen seemed remarkable for its shortness: it had become semiputrid; on its external surface were several whitish patches. The heart was large, but undiseased: its cavities contained much blood. In the descending aorta was a dilatation three inches in size; it adhered so intimately to the ribs and dorsal vertebræ as to be inseparable without laceration. On this cyst being torn, some thin arterial blood escaped. It contained a concrete mass, “*seu carniformis materia fibris destituta*,” enclosed in a peculiar, whitish, compact substance about eight lines thick, and resembling prepared lard in colour and consistence. Altogether the aneurismal tumour was as large as an ostrich-egg. The vena cava had sustained extraordinary dilatation: its tube was ruptured at the place of its contact with the aneurism, over the centre of which the ribs were carious, and one of them “*prorsus rupta et fracta*” — torn from its connexions and fractured.” Where the dorsal vertebræ were pressed by the tumour above the diaphragm, they had become spongy, and so corroded as to be easily penetrated by the finger. They emitted

* *SIDERATION*. — In ancient pathology, *αστροβολισμος* and *sideratio* were synonymously employed to express the particular manifestations determined in a living organ by the influence of some malignant star. Palsy, apoplexy, epilepsy, and similar affections, came in this way to be regarded as varieties of the morbid state which the mysterious term *sideration* designated. By closely viewing the description and concomitant symptoms of this state, however, we shall be led to regard the epithet as having been generally used to denote the sudden development of carious or gangrenous disorganization, in the ultimate stage of an acute disease.

an intolerably foetid odour. Notwithstanding the patient expectorated blood in profusion, and even appeared to be suffocated by extravasation of that fluid into the lungs, these organs retained no trace of disease. The cutaneous dorsal integuments, under which the tumour pulsated distinctly during life, were quite livid and ecchymosed like the back of a person on whom the beastly punishment of flogging has been inflicted.

V. Felix Plater * relates the following case, which is in some respects remarkable:— By an abortion in the fourth or fifth month, a male foetus was expelled from the womb of its parent. It had already become the subject of universal dropsy. The subcutaneous system, over its whole body, and even under the hairy part of its head, was distended with a lymphatic fluid. In the fundus of the bladder was a large aperture resembling the urachus: it terminated in the vena cava below the kidneys, and that vein itself was “*universam seroso sanguine refertam*,” gorged with serous blood.

There is great reason of regret that Plater had not been more minute in his investigation, and more circumstantial in his description of this singular aberration from natural structure in these important parts. If a large opening, “*meatus amplius*,” was continuous between the cavity of the urinary bladder and the channel of the vena cava, as the words, “*vesica ipsius fundo, in venam cavam desinebat*,” seem, though doubtfully, to imply, the subsequent proposition will arise for solution:— Admitting demonstration of the physiological aphorism, that the sanguineous circulation, and consequently the processes of secretion, commence with life and the first development of the foetal germ, what was there, in this instance, to prevent the circumfluent blood from penetrating into the inmost recesses of the bladder? and if the secretion of urine was at the same time proportionately active, what was there to prevent that fluid from being commingled with the blood, and thus, by secret but certain progression, contaminating the sources of life? Shall we then be authorized, by this view of the subject, in regarding the “*sanguis serosus*” noted by Plater, as having rather been blood containing an excess of urine, determined by the perpetual oozing of that secretion into the circulating stream? Shall we also be warranted in retracing to this phenomenon the death of the foetus, and its premature expulsion from the uterine state?

* Felicis Plateri Observationum in Hominis Affectibus plerisque, Corpori et Animo, Functionum Læsione, Doloꝛe, aliâve Molestiâ et Virio infensis, Libri tres. Operâ Felicis Plateri Nepotis. 8vo. Basileæ, 1641. Lib. III. in Partium Excretionē, p. 748.

VI. Jacques Aubert* published the subjoined history in 1579: it obtained a place among the pathological observations of Schencke† in 1609, and, just one hundred years from its first appearance, was consigned in an abridged form to the pages of Bonet's‡ meritorious collection. These writers describe it as an instance of what they call "*tabes spinea*:" it is introduced here as a complication of venous and arterial rupture.

A citizen of Lyons had brought himself into bad health by habits of gluttony and drunkenness. His disease was characterized by excruciating pain in the lumbar region, attended with great loss of strength and emaciation. Dalechamp|| and two other eminent Physicians were unable by any means to relieve his distress. Overwhelmed, therefore, with disappointment and incessant suffering, he discontinued taking medicine altogether, and abandoned himself, in despair, to his former intemperate practices. At last, exhausted with anguish and wretchedness, he sunk down on the threshold of his own door, and instantly expired.

Dissection.—Each of the kidneys exhibited traces of morbid action in their textures; two of the lumbar vertebræ were corroded, and over them were corresponding ruptures of the vena cava and aorta, from both of which a great quantity of blood had been effused. The vascular lesion, which proved fatal to this man, seems to have resulted from the excitement of carious action during the progress of its development in the contiguous spinal bones.

VII. Laurens,§ who was Physician to Henry IV. of France, concludes his discussion of the question — Is the

* Jacobus Aubertus: *Progymnasmata in Johanni Fernelii Librum de Abditis Rerum Naturalium Causis*. 8vo. Basileæ, 1579. Exercitatio XLIV.

† Joannis Schenckius: ΠΑΡΑΤΗΡΗΣΕΩΝ, sive Observationum Medicarum, Rararum, Novarum, Admirabilium, et Monstrosarum, Volumen tomis septem de toto Homine institutum. Folio. Francofurti, 1609. Pp. 456, 457.

‡ Theophilus Bonetus: *Sepulchretum, sive Anatomia Practica, ex Cadaveribus Morbo denatis, proponens Historias et Observationes omnium Humani Corporis Affectuum, ipsorumque Causas reconditas revelans, cum Commentariis J. J. Mangeti, M.D.* Folio. Tomis tribus. Lugduni, 1700. Tom. II. p. 573.

|| Dalechamp was highly distinguished among his cotemporaries as a physician, a botanist, and a profound scholar. Plumier has paid an elegant and deserved tribute to his name, by conferring it on one (*Dalechampia*) of the euphorbiaceous family of plants.

§ Andreas Laurentius: *Historia Anatomica Humani Corporis; et singularum ejus Partium, multis Controversiis et Observationibus*

heart susceptible of becoming the seat of abscesses, of suffering solution of continuity, of enduring desperate diseases? with the following remarkable case:—"When I was writing these things," says he, "a rare and perhaps unheard-of instance of sudden death occurred among us. As Guicciardini, ambassador of the Grand Duke of Florence at the French court, was walking, in perfect health, with some courtiers in the hall of the palace, and conversing familiarly with them, he fell suddenly to the ground, breathless, pulseless, lifeless. Some of many persons who hastened to inform the king of this alarming event, represented the nobleman as really dead, others as apoplectic, others as epileptic; but several did not altogether despair of his resuscitation. By the royal orders, Laurens repaired immediately to the spot, and found the ambassador absolutely exanimate; and while many said the cause of his death must be in the head, he was struck, indeed, with astonishment at the accident, and declared, in the presence of numerous bystanders, its cause to be in the heart.

Dissection.—Next day the body was inspected, when the heart was found so prodigiously enlarged as to occupy nearly the whole of the thorax. On the ventricles being laid open, a profusion of blood, amounting to three or four pounds, issued through the incision. The vena cava, at its junction with the auricle, (*"cavæ quidem venæ ostium disruptum, omnesque illæ membranulæ tricuspidæ laceratæ,"*) was ruptured, and the tricuspid valves lacerated. The aorta, at its origin, was enlarged (*"ut brachii æquaret amplitudinem"*) to the size of a man's arm. From relaxation of all the cardiac valves (*"laxatis itaque ostiolis omnibus velut habenis"*), so great an accumulation of blood had taken place in each of its ventricles (*"utrumque sinum"*), that the heart's contraction and expansion were prevented, and the man instantly died.—Such, concludes Laurens, was the source of this premature and sudden death, connected with which this one thing is wonderful, that, without any determining external cause, such as a blow or a fall, vociferation or anger, the tube of so large a vessel should have been ruptured.

Lancisi * regards the preceding history as being very similar in its circumstances (*"tam simile quàm ovum ovo"*) to the one related by himself, but cannot join the French anatomist in considering it as remarkable that the vena cava should have been ruptured without being subjected to the

Novis illustrata. Folio. Francofurti, 1603. Lib. IX. quæst. xviii. p. 368.

* Joannes Maria Lancisi: Opera quæ hactenus prodierunt omnia. 4 Tom. 4to. Romæ, 1745. Tom. I. pp. 135, 136.

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influence of an external cause, for the reason of its being consistent, as he thinks, with daily observation, that internal causes are quite capable of determining such a result.

A remark, by Morgagni,* on this case, is expressed in a very particular way: it is thrown into the same sentence with a stricture on the description given by Puerarius of the lesions observed in the body of a gentleman, whose sufferings were terminated by a sudden death. It is this:—"But really, when Laurens says the effusion was profuse in the ventricles only, and does not even allude to its being present in the pericardium, I doubt, though I am not sure, whether the rupture of the vena cava could have happened solely in its inner face."

When Morgagni could discover something remarkable in Laurens omitting to mention, or even to hint at, an accumulation of extravasated blood in the pericardium, when both the ventricles were replete with that fluid, he would have exercised but small courtesy to the learned Parisian, whose elegant and perspicuous Latinity even the father of morbid anatomy himself might have done well to imitate, had he made some slight endeavour to account for this silence by a pathological explanation, rather than to depreciate the case by confining his notice of it to the expression of an oblique demur. More causes than one, however, might conduce to bring these organs into the state Laurens has described. There may be profusion of extravasated blood in the ventricles, and none in the pericardium, when that membrane adheres intimately and universally to the external surface of the heart. Such a state of the heart and its capsule is well known to anatomists, and Morgagni himself† has related nine valuable illustrations of it from his own experience. From the enormous enlargement of the heart in this subject, and dilatation of the aorta within the pericardium, maintaining constant pressure of that membrane against all the circumjacent surfaces, it was scarcely possible that the heart could escape being almost inseparably united to its capsule by morbid adhesion. Such being the case, there could not be congestion of blood in the pericardium; and, of course, that circumstance required not to be particularized.

Extravasated blood, moreover, might be deposited, to their repletion, in the ventricles, while the pericardium was com-

* Joannes Baptista Morgagni: *De Sedibus et Causis Morborum per Anatomen indagatis*. 4to. 4 Tom. Lovanii. Tom. II. epist. xxvi. art. 28, p. 281.

† Epist. IV. art. 19; V. 19; VIII. 6; XXII. 4, 10; XXIV. 11; XXX. 7; XXXV. 12; XLIX. 4.

pletely wanting. Such an aberration from natural structure is indeed of rare occurrence; but it has been seen and described by various observers.* Although such examples of it are admitted by Bonet and Lieutaud as interesting contributions to the science of preternatural organization, they have been doubted or denied by authors† whose sentiments will ever be regarded with reverence by the cultivators of anatomical philosophy. Nevertheless, we are led to feel and to lament that perfection is not an attribute of our nature, when we find illustrious men, in their management of this question, endeavouring, with the weakest, as well as the worst kind of "medical logic," to repress our credence in the existence of an entity by the shadowy testimony of an assumption: — *because they never saw the pericardium wanting, therefore the pericardium never was wanting.* Merat,‡ a recent pathologist, of some distinction, has chosen thus to express himself: — "C'est cette manière d'être du péricarde (l'adhérence du péricarde au cœur), vu sans réflexion, ou par des personnes peu instruites en anatomie, qui a fait croire que quelquefois la séreuse du cœur manquoit; lésion qui n'a jamais été rencontrée, si ce n'est peut-être dans quelques fœtus point viables: Adhesion of the pericardium to the heart, observed without reflection, or by persons unskilled in anatomy, has led to the belief that the serous envelope of that organ has sometimes been wanting; a lesion which *never* had existence, except, perhaps, in some fœtuses insusceptible of life." — M. Merat must really have entertained a sublime idea of his own consequence, when he expected his mere dictum would be admitted as sufficient reason for denouncing, as the statements of rashness or ignorance, all those reports of instances wherein the heart was found absolutely destitute of its capsular membrane. The fact, however, is indisputable: the authority of Dr. Baillie, though it stood alone, would put it altogether beyond being questioned.

With the modesty of exalted genius and the simplicity of truth itself, our British pathologist concedes all due respect

* Columbus, Bartholinus, Littre, Vaubonnais, Duvernoi, Tulpius, Hoyer, Schenckius, Canani, Harder, Vieussens, Larrey, and Strathius, have recorded such cases. Vide Morgagni, Tom. II. pp. 208, 209; Portal, Tom. III. p. 2; Senac, Tom. II. pp. 338, 339; and Dr. Baillie's paper in Transactions of a Society for the Improvement of Medical and Surgical Knowledge, Vol. I. p. 91.

† These are Peyer, Stulpart, Van der Wiel, Friend, Lancisi, Kaaw Boerhaave, Morgagni, Haller, Senac, and Portal, in each of whose works the author's objections are stated.

‡ Dictionnaire des Sciences Medicales, Tom. XL. p. 361.

to former historians of this malformation, as well as to the disbelievers in its reality; and then proceeds to delineate the characteristic features of the phenomenon,* which seems to have filled his own mind with wonder and delight.

Upon opening the chest of a man about forty years of age, Dr. Baillie was exceedingly surprised to see the naked heart lying on the left side, and could scarcely at first believe what he saw; but the circumstances were too striking to keep him long in doubt. The heart was as bare and distinct as it commonly appears in opening the pericardium, and every collateral circumstance confirmed the fact.

The mediastinum consisted, as in common cases, of two laminæ of pleura; but it was somewhat changed in its direction, being inclined to the right side of the chest, and lying upon the right of the heart. Both laminæ were connected together, through the extent of the mediastinum, by the intervention of the cellular membrane, and crossed over the vena cava superior about an inch above its entrance into the auricle. The heart lay loose in the left cavity of the chest, unconnected in any way except by its vessels; was of a large size, elongated in its shape, and had its apex opposite to the right rib. The right auricle was obviously in view in the same manner as when the pericardium has been opened, and the vena cava superior and inferior were clearly observed entering into it. The appendage of the left auricle was as clearly in view; and when the heart was inverted, so as to have its apex turned upwards, the extent of its cavity was seen, with the two pulmonary veins of the left side entering behind the appendage. Both its ventricles were distinct, with the coronary vessels running upon them; and the aorta and pulmonary artery were seen clearly emerging from them. The heart was involved in the reflection of the pleura belonging to the left side of the chest, which became its immediate covering; and upon making the slightest incision into the substance of the heart, its muscular structure was laid bare, as in any common heart deprived of its pericardium. There was no connexion between the heart and the diaphragm, but they were entirely separate; and the diaphragm opposite to

* As this valuable case stands in a volume now rather difficult of access, the chief circumstances, as they regard the anatomy of the parts, are here introduced. Some general observations and remarks on the use of the pericardium accompany the original, which is illustrated by a distinct and beautiful engraving. It will be found in the Transactions of a Society for the Improvement of Medical and Surgical Knowledge. 8vo. London, 1793. Volume I. No. 6, pp. 91 — 102.

the flattened part of the heart was covered only by a reflection of the pleura. It is well known that, in ordinary cases, a portion of the pericardium adheres firmly to the diaphragm, which forms a medium of connexion between it and the heart. In adhesions, too, of the pericardium to the heart, its attachment to the diaphragm is always the same as in the ordinary healthy structure of these parts. The apex of the heart being lower down than usual, there was a deficiency of the left lung corresponding to this change of situation. The phrenic nerve of the right side ran between the two laminæ of the mediastinum, near that edge of it which was applied to the right side of the heart. The left phrenic nerve ran between the same two laminæ of the mediastinum, almost immediately under the sternum. This is a great deviation from its natural course, for it commonly passes on the outside of the pericardium, following the obliquity of the left edge of the heart. All these circumstances were seen upon simply removing the sternum with a small portion of the ribs, and therefore put the want of pericardium* in this subject beyond all doubt. "Did the ascertaining of this singular *lusus naturæ* require any other evidence than the description which we have given," says Dr. B. with his characteristic modesty, "it would happen to be supported by a very large testimony, for it has been seen by many medical gentlemen in this metropolis, who are eminently skilled in anatomy, and by a great number of students, who are very capable of judging."

VIII. Taking the doctrine, without examination, from the Greek, Roman, and Arabian Surgeons, Marianus Sanctus† describes, as certainly mortal ("*quæ hominem ad Acheronta sine viatico emigrare cogunt*"), all wounds of the heart, cerebral substance, wind-pipe, lungs, liver, gall-bladder, diaphragm, stomach, spleen, small intestines, kidneys, and bladder of urine. The "lethality" of wounds in these organs is admitted, and perhaps for the same reasons, by Ambrose Paré,‡ who superadds to the list those of large blood-vessels

* The distinctions between adhesion of the pericardium to the heart, and the appearances when that organ is altogether destitute of its capsule, are stated, with great perspicuity and conciseness, by Dr. Baillie, in his *Morbid Anatomy*, pp. 13, 14. Third edition. London. 1807.

† Marianus Sanctus: *Compendium Chirurgicum, et Libellus de Modo examinandi Medicos et Chirurgicos. Extant apud Uffenbachii Thesauri Chirurgiæ. Folio. Francofurti, 1610. Pp. 871, 932.*

‡ Ambrosius Paræus: *Operum quæ Latinitate donata Jacobi Guillemæu labore ac diligentia in lucem prodierunt. Folio. Parisiis, 1593. Extant etiam apud Uffenbachii Thea. Chir. Pp. 231, 235, 654.*

and the intorspinal brain. "Extinction of life is invariably consecutive to a wound of the vena cava or aorta, by reason," says he, "of the great and rapid effusion of blood, with dissipation of the animal forces and spirits, from which results an interception of the cardiac and pulmonary functions, determining the sufferer's inevitable death." In the chirurgial creed of John Brown,* a still higher degree of importance is attached to lesions, whether organic or functional, of the "hollow vein." "The disease," says he, (p. 68,) "was an episthotonal convulsion made by coagulation in the vena cava, the which does abound oftentimes with thick and viscost humours!"—"The vena cava," he adds, in another place, "by the ancients was called *κοιλην μεγαλην*, that is hollow and large; this being the fountain of human nature and the flood-gate of our microcosm, and the common mother of the rest, except the umbilical and port-vein. It is bred out of the gibbous part of the liver; it is seated according to the length of the back, and runs directly through both venters, hereby conveying of its blood to *all parts*!"—"If it be wounded, a flux of black blood succeeds; if the wound happens in the right side, the veins do speedily empty and flag, the face looks pale, and the extreme parts do grow cold, the faculties wax weak, and soon after these the patient's life is taken from him."

Forest† expresses himself on the nature of this lesion with a peremptoriness which would indicate his having observed many instances of its occurrence. After his own manner, too, he strengthens his aphorism of its "lethality" by negative and positive argument. "Wounds of the vena cava," says he, "are certainly fatal; not because it is one of our noblest organs, but on account of its use: for, since *all* the blood passes through its channel, when the vessel is disrupted, all the *vital* blood escapes. Besides, *its substance is nervous, and, consequently, cannot be regenerated*. Moreover, its situation is so profound that it cannot be reached by the hand: therefore, wounds of the vena cava are necessarily mortal, '*nisi Dei munere sanentur*!'"

* John Brown: A complete Discourse of Wounds both in general and particular; whereunto are added, the several Fractures of the Skull, with their Variety of Figures, and also a Treatise of Gun-shot Wounds in general. 4to. London, 1678. Pp. 68, 277, 278.

† Shall we regard this sentiment as a modern illustration of the kedmatous state of the vena cava to which Aretæus so laconically alludes?

‡ Petrus Forestus: Opera Omnia. 4 Tom. folio. Rothomagi, 1653. Tom. IV. Observat. Chirurg. lib. vi. obs. ii. p. 150.

IX. Hildanus, in his epistle to Dr. Weické * on the danger of internal hemorrhage, communicates the case of a young Savoyard, who was wounded in a combat by the sword of his antagonist. The weapon pierced his body a little below the navel, and in a few hours the man expired. — His abdomen was found replete with blood, which had flowed from a punctured opening in the vena cava, near where that vessel receives the emulgent veins.

X. Paaius † gives the following brief account of a wound of the cava; — “ In the year 1594, I dissected a man who took away his own life by stabbing himself with a knife in the right hypochondriac region, immediately below the ribs. The vena cava was wounded, and a great quantity of blood effused into the cavity of the abdomen.”

XI. Timæus ‡ has the following case: — A. F. was wounded in the right side by a thrust with a sharp-pointed sword. He lost a great deal of blood, and soon began to complain of a pain ascending to his throat. Bilious vomiting supervened, with sanguineous dejections, dimness of vision, faintings, and death. — On the abdomen being laid open and the blood removed, the liver and trunk of the vena cava were discovered to have been wounded, which wound was of itself pronounced to be the cause of the man's death.

XII. Bartholin, § assisted by Philip Hacquet, inspected the body of a man, in 1669, who, during the labour of digging, fell down lifeless. On dissection, he found the vena cava inferior ruptured near the heart, and the viscera inundated with blood.

XIII. Puerarius, in his edition of Burnet's “*Thesaurus*,” § has inserted the following case, apparently from personal observation. In the form, also, of an abridged transcript, it stands among Bonet's ¶ Illustrations of Cardiac and Pulmo-

* Gulielmus Fabricius Hildanus: *Opera Observationum et Curationum Medico-Chirurgicarum quæ extant omnia.* Folio. Francofurti, 1682. Obs. Chirurg. Cent. III. obs. lvii. p. 243.

† Petri Paaii *Observat. Anatom.* 4to. Lugd. Bat. 1616.

‡ Bald. Timæus, *Responsa Medic.* 20. 4to. Lipsiæ, 1668.

§ This case is given thus briefly and without comment in a letter from Thomas Bartholin to D. Sachsus, and published in the *Ephemerides Natur. Curiosorum* (Dec. I. ann. i. obs. ci. p. 204).

§ Daniel Puerarius: *Thomæ Burneti Thesaurum Medicinæ Practicæ ex præstantissimorum Medicorum Observationibus, Consultationibus, Consiliis, et Epistolis, summâ diligentia collectum, ordineque alphabetico dispositum, et Observationibus selectissimis auctum.* 12mo. Tom. II. Genevæ, 1678. Lib. III. p. 345.

¶ Theophilus Bonetus: *Sepulchreti, suprâ citati.* Tom. I. pp. 836 et 881.

nary Lesions, and is again introduced into his section on the Causes of Sudden Death, in terms which would seem to imply his having witnessed the dissection, or obtained the notes from an observer more partial to minute researches after death than Puerarius appears to have been.

L. S. a Genevan counsellor, aged thirty years, had long suffered from palpitation of the heart, asthmatic paroxysms, and a dull pain in the head, accompanied with extreme prostration of strength. By this state of his health, he was prevented from appearing often in public: he had been more than two years married, but remained childless. On the recurrence of his asthmatic seizures, he required to place himself in the open air, for the purpose of avoiding suffocation. In the end, August 1670, as he was reclining on a couch at table, an accession of his cardiac and pulmonary symptoms returned with extraordinary violence; and in hastening to the window, he sunk on the floor and died.

Dissection.—According to Bonet's notes, coagulating blood distended the pericardium. Near where the vena cava approximates the right ventricle of the heart ("*in ventriculi cordis dextri confinio*") was a large rupture of that vein. A particular substance, partly membranous, partly sarcomatous, arose from the cardiac auricles; its superior part nearly equalled the heart in size; it was oval, and formed a shell, containing a mass of condensed fibrine. This morbid production was closely attached to the adjacent blood-vessels, which had sustained enormous ("*maxima ac enormis*") dilatation. The lungs were much enlarged, and loaded with sanious purulent matter. No trace of disease could be discovered in the liver, but it had attained preternatural magnitude. The spleen was also unusually large and indurated. Vascular patches, the effects of inflammatory excitement, remained on the internal surface of the stomach, the coats of which were remarkably thin, and its volume small. Traces of the pre-existent inflammation ("*prægressi æstus et incendii notas*") were found in the intestines and mesentery: some parts of them also had become sublivid. A profusion of serous fluid was congested between the cerebral membranes.

The consummating cause of this gentleman's death is ascribed by Puerarius to rupture of the vena cava, with effusion of blood into the pericardium and right ventricle of the heart, from which it was removed ("*plenis manibus in grumos concretus*") in large clots. He describes the fleshy membranous formation, "superposed on the natural heart," as resembling another heart in size and figure, and forming as it were a cushion and prop ("*veluti tomentum et fulcrumentum*") to the varicose veins, which it encompassed on all sides. "As the veins, therefore, were exceedingly dilated, and

as free *expansion* of the arteries must have been prevented | that preternatural body, it is my opinion," he adds, " that : inordinate flow of blood became the cause of the veno dilatation, and that the blood (*per diapedesin* * *extillante* oozing from the morbid veins supplied matter for the development of the sarcomatous substance." This substance growing by degrees on these vessels, at last formed that mass which, having ultimately contracted the rudiments (" *putridinis rudimenta*") of erosive ulceration, wasted (" *affricuit*" at the same time, the structures of the vena cava and of the heart itself. By this process the " putrescent vein" came to be easily ruptured; and to it can be retraced the cause of the depression of his animal and vital functions, and of the patient's sudden death.

As an illustration of pathological induction in the end of the seventeenth century, the commentary on the venerable Bonet's report of this case may be exhibited. We have there stated, that the counsellor's Physicians ascribed his abrupt decease (" *suffocato cordis calori nativo*") to suffocation of the heart's native heat by the rapid effusion of blood in its capsule, and particularly into its right ventricle. The gentlemen also considered the rupture of his vena cava, well as the varicose " constitution" of that vessel's trunk, being consecutive to the operations of a primary and ultimate cause—an exuberant quantity of blood, whose free passage was obstructed by the extraneous morbid growth formed at the cardiac auricles, and the adjoined (" *vasis annexis*") vessels which were compressed by it—and the " corruption and putridity" of the concave and interior part of the fleshy excrescence itself, which being extended to the vena cava predisposed its tube to (" *crepaturam*") bursting and disruption. The heavy headach was, moreover, referred to them to the extraordinary congestion of serous liquid between the membranes of the brain. They also deduced the languor

* *DIAPYDNEISIS*, from *δια* and *πυδναι*, is a nosographical epithet constructed by the Greek Physicians for the purpose of distinguishing the phenomena of sanguineous exudation. With them its signification was definite: it denoted the slow oozing of blood through the pores of vascular tubes. In later times it has come to be applied to all kinds of hemorrhage from the cutaneous blood-vessels. *Poerai* employs it in the former acceptation, while theorizing on the morbid state of the vein; and the state which he describes may be regarded as the first stage of the *kedmatous* condition which *Aretæus* has apparently from actual observation. Considered as designatory of hemorrhage from the cutaneous vessels, it constitutes a rare and remarkable form of disease. Several instances of it are recorded in the writings of pathological historians.

of the animal and vital faculties from "obstructed fluxion of the blood and spirits," produced by compression of the large blood-vessels by the morbid mass—from the putridity engendered in that mass—and from phlogosis of the viscera, and the debility thereby induced.

Morgagni, amid the multitude of his necrotomical researches, seems never himself to have inspected the body of a subject whom rupture of the vena cava had destroyed. He was not unacquainted, however, with the nature of this irreparable lesion, and a due portion of his immortal work* is occupied with remarks on such histories of it as had come under his observation in the writings of earlier pathologists. He omits all detail of the original circumstances, and, beginning with animadversion on the sentiments of Aretæus, proceeds with a concise review of the cases recorded by Amatus, Donati, Laurens, Hacquet, Puerarius, Lancisi, and Paterius, the outlines of which are now consigned to the pages of this Journal. With reference to the case of Puerarius, and that extracted from the Anatomy of Laurens (No. VII. of this essay), a sentence† has been left by him, the meaning of which it is difficult to apprehend through the obscurity of his diction. My readers will be pleased to accept the following as the best interpretation I have been able to give of its import:—"For," says he, "I am not so well able to ascertain in what sense I should understand (Puerarius's expression) rupture of the vena cava with effusion of blood into the pericardium and right ventricle of the heart, as the words of Laurens, who was ignorant of the sanguineous circulation, when he says that from rupture of the auricular extremity of the vena cava and laceration of all the tricuspid valves, a mortal effusion of blood took place into the right ventricle of the heart; but, really, when he (Laurens) mentions its (the effusion's) having been profuse in the ventricles only, and

* Epist. XXVI. art. 28.

† "Me enim minus ibi assequi posse, fateor, quâ ratione hæc intelligam *disrupta vena cava et effuso sanguine in pericardium, et cordis dextrum ventriculum*, quam in observatione Laurentii, sanguinis circumitionem ignorantis, ob venæ cavæ *ostium disruptum, omnesque illas membranulas tricuspidales laceratas*, lethalem in dextrum quoque cordis *sinum effusionem sanguinis factam esse*: quam, ut verum loquar, cùm in ventriculos dumtaxat, eamque ingentem, in pericardium autem non modò nullam memoret, sed ne significet quidem; suspicor, nec tamen satis scio an venæ cavæ disruptio acciderit in facie tantummodo interiore. Sed nimirum cordis ventriculi fato quodam negotium sæpius facessunt in descriptis venæ disruptionibus intelligendis."—Epist. XXVI. art. 28, Tom. II. p. 281.

does not even intimate its presence in the pericardium, I doubt, though I am not certain, whether rupture of the vena cava could have happened solely in its interior face. By some fatality, however, the ventricles of the heart frequently occasion difficulty in understanding descriptions of the rupture of that vein."

The difficulty which presented itself to the mind of Morgagni, with respect to the preceding case, as depicted by Puerarius, seems to have arisen in a great measure from his overlooking some of its characteristic circumstances in their anatomical and pathological relations. In Bonet's version of the same history, an accumulation of blood in the right ventricle is not mentioned: Puerarius, however, states this fact in explicit terms; "*effuso sanguine*," says he, "*in pericardium et cordis dextrum ventriculum, inde plenis manibus in grumos concretus educebatur*:" but Morgagni cannot comprehend how such a phenomenon could have been produced. Nevertheless, on examining the original sketch, we shall find Puerarius describing an organic lesion simultaneously determining its ultimate effects on the vena cava and the heart. In theorizing, also, on the progressive development of this lesion, he regards that vein as having been the primary seat of the disease, and the point on which the sarcomatous excrescence first began to vegetate. By degrees, this growth, as a morbid centre, imparted its degenerative influences to all the contiguous veins, and in the end implicated the approximate surface of the right ventricle. By and by, the internal parts of the tumour went into a state of ulceration, which ceased not to extend its ravages till, by gradual action on the venous and cardiac structures, it imperceptibly eroded them, so as to facilitate their disruption and the consequent extravasation of blood into the capsule and right ventricle of the heart.

Puerarius, then, as I conceive, has described a complicated organic lesion, the nature and extent of which will be understood by a view of the parts in their anatomical relations. The abdominal vena cava terminates in the right auricle, at a point between the end of the thoracic vessel and the ventricle, from which, as it ascends, it is not half an inch distant. A sarcomatous mass, large as the heart itself, and having its origin in the auricle, communicated morbid association to all the circumjacent parts, and particularly to the wall of the right ventricle; "*tum vena cava*," says Puerarius, "*tum ipsi cordis substantiæ affricuit*." When the coats of the vein and the wall of the ventricle came, in this way, to be so far injured by the disease (ulcerative erosion, the *kedmata* of Aretæus?) as to render them incapable of longer resisting the expansive force of the circulating blood, a rupture of the

weakened parts in both organs necessarily took place; and through the apertures thus produced, the blood returning by the abdominal vena cava would continue to flow out of the opening in that vessel, and enter into the ventricle by the opening in its wall, so long as the sanguineous elements preserved their susceptibility of impression from the forces by which their circulatory movements are maintained.

XIV. Dolæus * inspected the body of a Hanoverian maid-servant, aged eighteen years, hæmophthysical, and endowed with a choleric temperament. This woman having risen early and opened the window-shutters, ran to the kitchen, uttering loud screams. Her cries awakened her master's son, who, with horror, found the unhappy girl stretched on the floor and covered with blood. Dolæus, being called, hastened to her assistance, but found her lifeless.

Dissection. — All the abdominal viscera were perfectly sound, only the gall-bladder was quite empty. One of the ovaria contained a multitude of ova "*tenuissimis membranulis prædita*." On milk being injected through the Fallopian tube, these ova disappeared: "which circumstance," says Dolæus, "confirmed the view I had entertained of the process of conception." The lungs were blackish ("*ad nigredinem vergentes*") and inflamed. There was a ruptured opening ("*in iisdem venam cavam disruptam*") in them and the vena cava, which vessel contained much frothy blood. The heart was pale; some grumous blood remained in its ventricles and the aorta: there was scarcely an ounce of this fluid in all the rest of the body. "If, on considering all these things," says the author, with perfect exemption from doubt of the induction, "you refer the cause of this person's death to the bile being poured into the blood, and occasioning an excessive fermentation of it, you will perhaps hit the mark." Here is a fact demonstrating the pathological accuracy of Aretæus, and his doctrine, that hemorrhage from the vena cava, through the lungs and mouth, produces sudden death. In this instance the disease seems to have originated in the respiratory organs, and to have been consecutively distinguished by inflammation, ulceration, and expectoration of blood, together with adhesion of the pulmonary to the contiguous surfaces and the vena cava, which, being progressively eroded and lacerated in the part of its tube

* Johannes Dolæus: Opera Omnia. Folio. Francofurti, 1703. Exenteratio Ancillæ Hæmoptysi subito extinctæ: extat etiam in Miscell. Curios. Med. Phys. Academ. Naturæ Curiosorum; sive Ephemer. Med. Phys. German. Curiosarum, Ann. IX. obs. cxxxv. p. 369.

nearest the morbid lung, permitted an instantaneous gush of blood into the air-cells of that viscus, and deprived the patient of life. Another proof of the nature of this lesion may be drawn from the state of the vein after death. It contained frothy blood ("*sanguis spumosis*")—blood with which atmospheric air, introduced through the apertures in the lung and the vessel, had been commingled.

XV. Poterius* relates, in very summary terms, the case of a healthy peasant who ceased to live in a manner as unexpected as the Hanoverian maid-servant. This man, having taken a hearty supper, retired to sleep with his bedfellow, to whom he spoke a few words, and — "*perpetuo somno se tradidit*" — died. He had no cough, we are told, nor difficulty of breathing, previously to his decease.

In this person the omentum was lacerated, a portion of the liver near the ribs suppurated, and the lungs ulcerated. Many parts of his body were livid, especially those which its own weight compressed. But "*hujus tantum repentinæ mortis fuit causa disruptio venæ in ventriculo cordis*" — the cause of this sudden death was rupture of a vein in the ventricle of the heart.

Notwithstanding the laborious Hoffman designates its author by the magnificent title of "*medicorum sui ævi princeps*," the foregoing sketch must be regarded as defective in the enumeration of characteristic circumstances, and inaccurate, if not really erroneous, in point of anatomical description. We are left without a name to the vein, and have not been told whether the lesioned vessel was in the *right or left* ventricle of the heart. But it may be inquired, whether a vein exists in either ventricle, from the rupture of whose tube sudden death may ensue? The case, indeed, is noticed by a French writer† among ruptures of the vena cava, and it is probable that Poterius did find a rupture of this vessel; but still it may be asked, when did the vena cava become a vein *in* either cardiac ventricle? The defect, or inaccuracy, or error of Poterius, moreover, did not escape the observant eye of Morgagni,‡ who seems to have regarded his "observation" as valueless, by dismissing it with the sarcastic remark, "You see Poterius proposing, as the cause of a sudden

* Petri Poterii Opera Omnia Practica et Chymica, cum Annotationibus et Additamentis utilissimis pariter ac curiosissimis Fridericii Hoffmanni filii: extant apud Hoffmanni Opera. Folio. Genevæ, 1749. Tom. IV. cent. iii. obs. lx. p. 118.

† Dictionnaire des Sciences Médicales, article Maladies des Veines Caves, Tome LVII. p. 143.

‡ De Causis et Sedibus Morborum, Tom. II. p. 281.

death which he relates, the rupture of a vein in the ventricle of the heart; but what vein, or where he designates a vein, describe to me if you can." Poterius, if he was a lover of laconism, might have escaped this stricture, had he chosen to name the vein, and describe its lesioned part, without incurring a great waste of words. *

XVI. Lancisi, who stands in the highest rank of pathological observers, regards, as one of the causes of sudden death, such a diminution of the mass of the blood as, being rapidly withdrawn from the heart and brain, annihilates the alternate movements of these organs, and intercepts the circulation: hence, he says, an abrupt bursting of the sanguineous stream from the vena cava, pulmonary vein, heart, or principal arteries, to a certainty and instantly extinguishes life. In illustration of this doctrine, the following, † among other important observations, is advanced.

Stefano Ascieri, a shoemaker, a sexagenarian, and corpulent, had sustained paroxysms of arthritic pain in his upper and lower extremities during the long period of eight years. These seizures were periodical, and occurred about the time of the equinoctial returns. Nearly two years before his decease, he began to be annoyed with cough and difficulty of breathing. Subsequently palpitation of the heart supervened, and was accompanied with a deep-seated, heavy, sometimes acute pain occupying the parts under the right side of his sternum, and extending itself to the shoulder. He had also a sense of confinement and of vascular pulsation in the chest. Latterly he experienced frequent vertiginous sensations, and had a feeling of unnatural heat within his head. At the same time a rapid loss of strength disabled him from working. On March 4, 1706, having taken some wine after dinner, he suddenly became speechless, and, with a painful struggle, expired.

Dissection.—All the abdominal viscera exhibited appear-

* Morgagni quotes a case of ruptured cava, by Philip Hacquet, from the *Ephemerides of Natural Curiosities*; but upon referring to it, I find that it is the same as that quoted from Bartholin, Hacquet having only assisted him in the dissection.

Salzmann, in Haller's *Disputationes Medicæ* (Tom. II. p. 589), alludes to a case in the *Ephemerides Germanicæ*, &c. (Vol. I. obs. 142), contributed by Nebelius, as one of rupture of the thoracic cava; but upon examining the original account in the *Ephemerides*, I find that blood was found, on dissection, to be effused in the cavities of the thorax; but it does not appear that the blood issued from a rupture of this vessel.

† Joannes Maria Lancisi: *Opera quæ hactenus prodierunt omnia*. 4 Tom. 4to. Romæ, 1745. Tom. I. pp. 131—136.

ances of perfect health: the gall-bladder contained a little darkish bile. The right half of the sternum was higher than the other, and the subjacent lung redder than the left. It adhered intimately to the costal pleura, and was remarkable for its firmness and magnitude. Immediately above the capsule of the heart was an aortal aneurism, having an oval bony layer on the external surface of the dilated artery, corresponding to the sternum and ribs of the right side. Beneath that layer and round the anterior internal surface of the aorta, "we found," says Lancisi, "a polypous substance resembling lard, so neatly incrustated into the arch" of that artery, "that the like was never before detected in an aneurismal cyst." This substance, on being melted and quickly refrigerated, appeared to be perfectly concrete, being inseparable into layers.

The consistence of this deposition is referred to the action of the blood ("*pulsioni sanguinis*") in compressing it against the external parts. On that point of the surface of the tumour which rested in contact with the lungs was a smaller polypous formation, covering and confining the aorta. The aneurismal cavity could readily admit a man's fist, and was so full of grumous blood as to appear incapable of receiving any other fluid. No opening, however minute, could be detected in it, although at the base of the heart, within its capsule, and at the inferior side of the aneurism, were several black streaks, the harbingers, perhaps, of larger apertures. The tumour did not exceed in length the arch of the aorta, which, beyond the aneurism as well as near the heart, preserved its natural diameter, and the integrity of its fibres unimpaired. The pericardium felt as if distended with a preternatural fluid, but it was soft. Being opened, two pounds of extravasated grumous blood were removed from its cavity. This blood had been effused through an orifice, one inch in diameter, in the *vestibule* of the vena cava, within the pericardium, and near the right auricle of the heart.

That this aperture was made by a liquid corroding the muscular texture of the vessel was plainly indicated, says Lancisi, by its margins being, not jagged and uneven, but quite smooth. He concludes, also, that the blood was prevented from sooner escaping into the capsule of the heart by the vein's "thin coat, which ends in the muscular," remaining spread over the ulcerating structure, and thus protracting the fatal effusion. This deduction presented itself to his mind on observing "*the thin coat's*" attenuated fragments still hanging over the edges of the ruptured orifice.

In removing the calvaria, the posterior sinus of the dura mater was incidentally wounded, and black blood gushed

profusely through the incision. The lateral sinuses were gorged with blood of the same kind. Limpid serum distended the ventricles, and was redundant at the origin of the spinal brain.

Subjoined to this important case is a series of remarks by Lancisi on the nature of aneurism and the philosophy of its symptoms. 'This is his theory of Ascieri's disease, deduced from consideration of his pathological history and the state of his vital organs after death:—The man's body, assailed by the podagral vice, superabounded with pungent ichorous humours. These, about two years before he died, took a determination on the præcordial parts, inducing cough, pain, oppression, and breathlessness. By and by, they (the humours) "*were intercepted within the tendinous substance of the aorta and the muscular substance of the vena cava,*" giving origin to irritation, convulsive action, and palpitation of the heart; then to exsion of the affected vessels, and ultimately to their ("*diloricationem*") bursting: in this, we are informed, the true nature of aneurism consists.

It is also the opinion of Lancisi that the "*sutrine trunk*" conduces to the formation of aneurism, and to the ("*mora pertinax salino-erodentium ichorum intra fibras eorundem cancellium*") the congestion of acrid humours in the textures of the thoracic vessels. Rarely, he says, do those who lead a sedentary "*incurvamque vitam,*" if they abound with vitiated juices, grow old without experiencing some important lesion of the lungs, large blood-vessels, or the heart. In agreement with such physiological views, he conceives that the dark streaks which marked the bottom of the aneurismal cyst do afford occasion for considering whether a subtle and pungent sanies, "*which every aneurismatic follicle perpetually effuses,*" was not insensibly extilled upon the vena cava, so as to accelerate at least its extensive erosion. Thus, in the diseased condition resulting from Lancisi's "*mora pertinax ichorum salino-erodentium,*" we have a substitute for the "*kedmata*" of Aretæus, who generally states inductions in laconic phrase, and resigns theory to the amusement of idler minds.

XVII. Professor Salzmann relates the following case of ruptured vena cava, in his dissertation * of Sudden Death

* Dissertatio Medica de Subitaneâ Morte à Sanguine in Pericardium effuso; quam Præsides D. D. Joh. Salzmann, Anat. et Chir. PP. et h. t. Decano examini subjicit, ad diem Aprilis 12m. 1731, Johannes Goeritz, Ratisbonensis. 4to. Argentorati, 1731.—A meagre analysis of this valuable essay is given in *Commercium Literarium ad Rei Medicæ et Scientiæ Naturalis Incrementum*, institutum, quo quicquid novissimè observatum, agitaturn, scriptum, vel

from Effusion of Blood into the Capsule of the Heart. The subject of it was a citizen of Strasbourg, in the prime of life, a hair-dresser by trade, possessing a melancholy choleric temperament, and exceedingly irascible. For three years this man was afflicted with a tensive and heavy pain under the sternum: it experienced paroxysms of exacerbation, and was accompanied with a similar pain in the back between the scapular regions. He also had difficulty of breathing and a sense of constriction in the chest on the least exertion. For relieving his tedious and afflicting sufferings, he took an active emetic, and was much exhausted by the severe efforts in vomiting which it produced. At the same time a loud hoarse cough ("*tussis ferina*") supervened. In a few days afterwards, his strength being a little recovered, he left his attendants after dinner, and went to the door in high spirits. On stretching out his hands there in an easy manner, he sunk to the ground, and instantly expired, without uttering either word or groan.

Dissection.—Extravasated blood, still fluid, distended the pericardium, from which it issued in profusion on that membrane being incised. The sac of the vena cava had acquired preternatural magnitude, and was perforated, about a finger's breadth from the corresponding auricle, by a triangular orifice capable of admitting a thick-barrelled quill. Through this opening the blood had been effused into the capsule of the heart. This organ itself was large and flaccid; its right ventricle altogether empty. Dr. Salzmann, and his colleague, Professor Boecler, who assisted him in the dissection, were prevented from a farther prosecution of their researches by the importunities of the man's relations.*

XVIII. De Haen, † in his section "*De Colicâ Pictorum*," details an interesting history, in which, among other extensive

peractum est, succinctè dilucidèque exponitur; Anni MDCCXXXI semestre posterius. 4to. Norimbergæ, 1731. Tom. I. p. 375.—The essay was reprinted by Haller in his *Disputationes ad Morborum Historiam et Curationem facientes*. 4to. Lausannæ, 1757. Tom. II. No. lxvii. p. 583.

* Joannes Fantonius is mentioned by Breschet in the *Dict. des Sciences Méd.* Tom. VIII. p. 136, and also by Portal in his *Anatomie Médicale*, Tom. III. p. 355; but I cannot discover to which of his works they refer. I have glanced at his *Observationes Anatomico-Medicæ*, his *Dissertationes Anatomicæ*, and his *Opuscula Medica et Physiologica*, and been unable to detect any observation respecting rupture of the vena cava in any of these works.

† Antonius de Haen: *Ratio Medendi in Nosocomio Practico Vinlobonensi*. 3 Tom. 8vo. Lugd. Bat. 1768. Par. X. p. 161.

visceral lesions, a large rupture of the vena cava was discovered to have been the immediate and unforeseen cause of the patient's death.

A middle-aged chemist and pharmacopolist had experienced slight and transient paroxysms of colica pictonum through the space of four years; but, during the last half of that period, they had become more frequent and more intense, subjecting him to accessions of suffering for two or three days every alternate month. In April before his decease, he sustained an exquisite attack of the disease, which, with short and irregular intermissions, completed, in the subsequent August, its fatal course.

This person's malady is regarded by De Haen as having had for its causes occasional intemperance in the use of Austrian wine, and the frequent and extensive preparation of plasters, in which lead, ceruse, and minium, in single or compound mixture, were combined. Its chief symptoms were, an excruciating pain in the umbilical region; excessive retraction in the anterior abdominal wall; obstinate torpitude of the bowels, with constriction of the rectum, which rendered the exhibition of a lavement exceedingly difficult, the alvine excretions resembling those of sheep; together with paralytic failures of the lower extremities.

This man had no ischury or vomiting, but was afflicted with dysury. Medicine at first procured considerable mitigation of his distress. In this improved state, however, he was annoyed with flatulency, and endured piercing ("*ac si perforarentur*") pains in the dorsal, epigastric, and lumbar regions. In a consultation, paregoric and camphorated emulsions, frictions, and anodyne fomentations over the dorsal spine, and daily oleaginous injections, were prescribed. Two days after this, De Haen found him in circumstances every way ameliorated. All his functions at last came to be so well restored, that he was able to walk out with some friends. At noon of the same day, he returned in good spirits and had dinner. About two o'clock, after conversing a long time on his domestic affairs, he found himself unwell, and called for some wine; but while this was being brought, he died.

Dissection.—After an incision had been made in the integuments, from the sternal to the pubic bone, it was accidentally discovered that all the joints of the subject, although forty-eight hours dead, remained flexible as during life, and that the countenance was little paler or shrunk, but retained much of its natural expression; and De Haen, with great ingenuousness, describes his alarm lest he should have commenced dissecting a living man. The eyes, however, were turbid and ("*obfuscatis*") dim; therefore the body was

truly dead, and the anatomist proceeded with his investigation.

On being laid open, the abdomen appeared to be quite full of extravasated blood, which was not removed till the viscera had been examined in their situation. What of the omentum remained scarcely equalled the breadth of two fingers in size: it was much displaced by the colon and disfigured, particularly its gastric portion. The cœcum contained a sacculated expansion, into which a man's hand could be introduced. Much irregularity prevailed in the local distribution of the stomach and intestines: the colon* exhibited several dilatations and six contractions, by some of which its tube was narrowed to the diameter of a common quill: the capacity of its descending portion was diminished to less than one-third of its natural size.

After an intricate search for its source, the sanguineous effusion into the abdomen was discovered to have proceeded from a lacerated aperture in the vena cava, immediately below the diaphragm. Out of this aperture, which was so large as to admit the point of a finger introduced into the vein from the right cardiac auricle, a little blood, on the vessel being pressed, could still be made to exude. Externally the heart itself retained no vestige of adipose structure: all its cavities were quite empty. The lungs had no trace of disease, only the left was attached to the dorsal pleura by a slight adhesion.

"But how," inquires the Professor, "shall we account for the laceration of this vein? When we find," he replies, "that it is intimately connected to the posterior surface of the liver by means of its hepatic branches—that the liver itself was greatly raised out of its natural situation by the enlarged and displaced colon—and that the colon, from its origin to its arch, would be distended with fœcal accumulations and ammoniacal air—we shall easily understand how the vena cava, adhering to an almost immoveable point, would, by the continued and forcible protrusion of the liver upwards, be insensibly outstretched, elongated, debilitated, extenuated, and ultimately dilacerated, so as to permit complete extravasation of (*vitali cruore*) the vital fluid."

XIX. By M. Bland† is related the case of Jacques

* These intestinal observations are beautifully represented in an engraving which accompanies the Professor's interesting and circumstantial description of the parts. Vol. III. cap. vii. tab. 3.

† Observation de Déchirement de la Veine Cave Supérieure. Par M. Bland, D.M. insérée dans la Bibliothèque Médicale. Tom. LVII. p. 144.

Barras, a peasant, aged thirty-seven years, well-made, and vigorous in constitution, who, in the act of making an abrupt and violent effort to raise a bundle of brushwood from the ground, felt an acute pain within the right side of his breast, which caused him to cry aloud and hastily raise his body into the upright position. He referred this feeling to the laceration of some internal part. Notwithstanding the pain, however, he tried to resume his work, but was unable to proceed. A state of intense distress now commenced: it made rapid progress. The man's countenance grew pale, shrunk, and expressive of profound apprehension. He sustained returns of a syncopal tendency, tottered in his gait, and could not support himself. Being conveyed to bed, he suffered from a diffused pain in the right half of his chest, and had difficulty of breathing, which every instant increased. His anxiety redoubled, and he expressed his anguish by incessant moanings. His paleness augmented: his pulse, at every instant, lost strength. Towards evening, his agitation gave place to great feebleness and dejection, his extremities became cold, and about midnight the vital forces were overpowered.

Dissection. — The superior vena cava was longitudinally lacerated to the extent of two inches, without exhibiting any other alteration of its texture. Dark blood filled, to repletion, the right thoracic cavity. The heart and large blood-vessels were quite empty. All the other organs remained free from disease.

XX. Dr. Doubleday, * in 1748, published the case of a dragoon, middle-aged and healthy, who was seized with giddiness, and fell from his horse insensible. This man's arm was punctured, but did not bleed. His senses and speech, however, soon returned, but all his pulses were extinguished. At the same time, his face, hands, and feet, grew deadly cold. He had no pain; and with exception of occasional tendencies to suffocation, his breathing was unimpaired. Being put to bed, he got some volatile medicine, and was blistered. Next day, eight ounces of blood were taken from his arm, and he had some loose stools. Still he was free from all pain, but had no pulse. On the following morning, he left his bed and seemed livelier; pulsation in the arm also had reappeared: he experienced some pain, however, in the throat. While sitting by the fire, he called hastily for assistance, stretched himself out, and immediately expired.

* Case of Sudden Death from a Rupture of the Vena Cava. By N. Doubleday, M.D. of Hexham: in *Medical Observations and Inquiries*, by a Society of Physicians in London. 8vo. 1776. Vol. V. p. 144.

Dissection.—All the abdominal organs were sound. On raising the sternum, the membrane lining its upper part was in some places inflamed, in others almost black, and the whole covered with little vesicles of air. Bloody pus, on pressure, issued from the inflamed parts. One side of the thorax contained a considerable quantity of water; the lungs adhered strongly to the costal pleura in the other. Coagulated blood filled the pericardium: the heart, though sound, was shrivelled and collapsed. In the vena cava superior, just where it enters the pericardium, was an opening fifteen lines in length. The vessel, between this rupture and the clavicles, was semiputrid, and could be torn like wet paper.

Dr. Doubleday points out as remarkable in this case—1st, That so considerable a decay in a part so essential to life as the vena cava should be attended with no complaint till its rupture; 2d, That the person could live forty-eight hours after such an accident. But it ought to be observed, he concludes, that four years before the event, the man narrowly escaped from a consumptive disorder in which he had purulent expectoration.

XXI. Portal* seems to consider rupture of the vena cava as quite a common circumstance. “Combien d'exemples,” he exclaims, “de ruptures de veines-caves et de leurs branches ne pourroit-on pas citer qui ont été mortelles!” Notwithstanding this intimation, however, our venerable instructor has declined favouring us with references to other instances of the lesion than to that of Fantoni, and those which Morgagni has done little more than name. It may be, therefore, some proof of its being infrequent when we find Portal himself, during his illustrious career of more than half a century, having it in his power to record only two cases of it from his own observation. Although less valuable from being unaccompanied with a history of the symptoms which preceded death, they are introduced here as pathological facts.

1. In the body of a female subject which was dissected for his anatomical demonstrations in the College of France, the Professor found the capsule of the heart full of blood. The structure of that portion of the vena cava which is comprised within the pericardium and a little above it, was in some places thickened, in others thinned, and had the appearance of being ulcerated on its internal face. In the vessel near the right auricle was an orifice, through which the blood had been extravasated into the pericardium.

2. On inspecting the body of a young girl who died sud-

* Antoine Portal: Cours d'Anatomie Médicale. 5 Tomes, 8vo. A Paris, 1803. Tom. III. pp. 354, 355.

denly in a cold bath, M. Portal discovered the vena cava superior to have been ruptured near the right auricle, and a great quantity of blood effused into the right cavity of the chest.

Professor Richerand* has a notice of this kind in his *System of Chirurgical Nosography*. "Violent percussions of the abdomen," says he, "may wound the viscera contained in its cavity without inducing a solution of continuity in the structures of its wall. Thus have I seen rupture of the abdominal vena cava of a young person occasioned by the wheel of a carriage passing over the belly."

M. Breschet,† in 1814, informs us that "Professor Boyer states in his lectures several facts of the same kind which occurred in his own practice." This eminent Surgeon, however, has not judged these facts of importance to merit insertion in the volume of his elaborate work‡ published in 1821, where his description and modes of treating the surgical diseases of the neck, the chest, and the abdomen, are comprehensively detailed. With regard to the action "*des instrumens contendans*" on the outside of the thorax, he observes, "by such means, the lungs, heart, and large blood-vessels, are sometimes *contused*, or even lacerated, by percussion or violent pressure on the chest; hence result mortal effusions of blood, sanguineous expectoration, inflammation, suppuration, and occasionally consecutive serous or purulent congestions." All the abdominal organs, he states in another place, are obnoxious to wounds. The liver, stomach, and intestines, are more exposed to such lesions than the mesentery, spleen, kidneys, bladder, pancreas, gall-bladder, blood-vessels, and the uterus in woman. As to wounds of the pancreatic and thoracic ducts, they have been regarded as possible; but it is doubtful if ever they have been actually seen, unless in large wounds, where these ducts had been divided at the same time with many other important organs. Wounds of the aorta, vena cava, portal vein, and large arterial or venous branches, are commonly followed by the symptoms peculiar to excessive hemorrhage, and sometimes to instant death. When a person sustains a violent contusion in the abdomen, he may be killed on the spot, or survive only

* Anthelme Richerand: *Nosographie Chirurgicale*. 4 Tomes, 8vo. A Paris, 1808. Tom. III. p. 345.

† Dictionnaire des Sciences Médicales. A Paris, 1814. Tom. VIII. p. 137.

‡ *Traité des Maladies Chirurgicales et des Opérations qui leur conviennent*. Par M. le Baron Boyer. 8vo. A Paris. Tomes I.—VI. 1818, et Tome VII. 1821, pp. 419, 420, 426, 484, 485. ..

a short time. In some of these cases, on the body being inspected, the liver and spleen are found crushed or lacerated; in others, the stomach and intestines bruised or disrupted, blood-vessels opened, the kidneys and bladder burst. Many instances of such lesions, he concludes with saying, are recorded by authors, and particularly in Morgagni's immortal work, which may be consulted with advantage.

XXII. Laurent Lovadina* described the case of a robust man, aged forty-two years, who, during a meal, swallowed a hard substance, which was supposed to be a bone, and which stuck in the pharynx, whence it required considerable time and repeated efforts to cause it to descend into the œsophagus. The irritation that was thus produced brought on a violent angina, which propagated itself to the bronchiæ, and became the source of a continual cough and of violent pains of the chest at each respiration. This state continued ten days, when the patient, getting up to pass his urine, was seized suddenly with a vomiting of blood, which speedily terminated in death.

Dissection. — Having disarticulated the lower jaw, and opened the trachea in its whole length, the internal membrane of the larynx was found in a gangrenous state. The vocal cords were almost entirely destroyed. The curtain of the palate, and the posterior parietes of the pharynx, also presented large gangrenous spots, which extended along two-thirds of the œsophagus. A little above the lower orifice of this canal a lacerated rupture was observed, which was considered to have been produced by the sharp angles of the bone. The lungs were collapsed and devoid of blood. The descending vena cava presented, in its external and anterior aspects, a rupture of an inch in length, situated at the distance of an inch from the right auricle. Another rupture, of less dimensions than the former, was observed in the anterior aspect of the ascending vena cava before its entrance into the pericardium.

Dr. Lovadina considers that the efforts that had been made to expel the foreign body from the pharynx, and the unremitting cough which continued for several days, impeded the

* *Memoire Scientifique e Letterarie dell' Ateneo di Treviso. Vol. I.* I have been unable to procure this work. The abstract which I have given of this case is a translation from the first volume of the *Journal Complémentaire du Dictionnaire des Sciences Médicales*. Paris, 1818. P. 93 — Into which work it has been translated from the *Memoirs of the Atheneum of Treviso*. The same case has also been cursorily mentioned in the eleventh volume of the *Repository*, p. 512.

circulation through the lungs; consequently the blood accumulated in the right cavities of the heart, and at first distended, and ultimately ruptured both the *venæ cavæ*. To this cause he adds a morbid disposition in the central organs of the circulation.

XXIII. Dr. Starcke published * the case of a serjeant, over whose abdomen the wheels of a waggon heavily laden had rolled. This man was admitted into the field-hospital at Fairs, in a state indicative of his having sustained some mental injury. He was exceedingly pale, and his vital forces seemed to be nearly overpowered. All his extremities were cold, his pulses languid and evanescent, his respiration laborious and distressing. He experienced frequent swoonings, had pain and distension of the abdomen, and indeed the general symptoms of internal hemorrhage.

His attendants were zealous and indefatigable in employing their best resources for his relief; but these were of no avail, and on the second day after his admission into the hospital, their patient expired.

Dissection.—Extravasated blood filled the interspaces of the abdomen, the principal organs of which retained marks of having been severely contused. The peritoneal and visceral surfaces exhibited traces of pre-existent inflammation. In the vena cava inferior, opposite the eighth dorsal vertebra, was a considerable rupture, through which the venous blood had been effused.

XXIV. My own experience furnished me with this and the subsequent observations.

September, 1815.—A. B. a peasant, aged thirty years, sound in constitution, and vigorous in person, fell more than twenty feet from the top of a hay-stack, and was carried home in a state of insensibility. On being roused by the application of analeptics and cold water, he did not at first complain of any particular distress. He became more and more agitated, however, and had a wildness of countenance, which alarmed his relations and attendants. About an hour after the accident, I found him in the following circumstances:—

He was pale, and could not speak without exciting intense pain in the chest; his under lip was tremulous; the facial muscles sustained irregular nervous movements; his face, head, and breast, were moistened with clammy sweat; his breathing was laborious and unequal; the voice quavered

Dr. Kennedy on *Rupture of the Vena Cava*.

and gradually failed; his pulses were feeble and intern the action of his heart palpitant.

His back had struck the ground, and he now descri seat of his principal sufferings as being in the org respiration, and a circumscribed spot between the shou

Being laid in a procumbent posture, his second an vertebro-sternal ribs were found with the appearar being fractured near their vertebral extremities. The considerable discoloration of the integuments, and th were intolerant of the slightest pressure, by which their exact conditions could not be ascertained.

While the dorsal and contiguous regions were beir mined, the man was seized with an oppressive attack (ness, accompanied by a tendency to faint. This gav to a paroxysm of coughing, which threatened suffocati terminated in the expectoration of nearly a pound of lating arterial blood. He now sunk into a state of pi exhaustion, being speechless, motionless, and parting with vital heat.

Sanguineous effusion in the lungs, with a complica costal fracture, was regarded by me, at the time, as tl cause of all these inauspicious symptoms; but, by tl cessive extinction of his pulses and other mortal ances, I was induced to pause before interefering in his In less than forty minutes, and before I had left his b my unfortunate patient expired.

Dissection.—Ten hours after death, the morbid pha found within the chest were few, but of an important A large mass of clotted purplish blood gorged th thoracic cavity. It had been effused through a ragge tudinal orifice, measuring six lines, in the pleural sid vena cava superior, near the point where this vessel receives the azygous vein before entering the capsul heart. About an inch above its termination in t auricle and within the pericardium, was a contractio vena cava, with a thickening of its coats, by whic more than one-third of its natural calibre.

The right lung at first felt as if distended by inf an aëriform or other fluid, which could be partially (by compression; but, on the organ being incised, it covered to contain more than a pound of florid, blood, which had escaped from a midute fissure in o bronchial arteries into the pulmonary cells.

Two ounces of pellucid lymph were taken from cardiac cyst. This membrane was thin and transpar heart seemed much paler than is natural: its ventri

empty and collapsed; its septum unusually thin. Similar defect of structure had place in the vena cava and all the other large arteries and veins. In every other respect the vascular system retained the characteristics of health.

Neither a vena azygos, nor other vessel adapted in any way to execute its functions, could be detected in this subject, after the most minute research.

All the abdominal viscera were preternaturally small: they appeared to be quite exanguious, but unaltered in structure. In the left ureter were three considerable enlargements of its tube, bearing great resemblance to the aneurismal dilatations of arteries. With this exception, which, perhaps, was rather an anomaly than a disease, the urinary organs were in all respects healthy.

Many places of the calvaria were transparent; the brain singularly large, and its convolutions prominent. About three drams of limpid serum were removed from each of the cerebral ventricles.

The second and third ribs had not been fractured: they were dislocated inwards, their spinal attachments ruptured, the transverse processes of their corresponding vertebrae broken off; and the dorsal pleura, over an irregular space fifteen lines in diameter, detached from the surface of the spine, on which and the face of the separated membrane were globules of watery blood, giving a faint tinge of redness to the lesioned parts.

May we not, from fair induction, regard the want of an azygous vein, the preternatural thinness of the vena cava, and its intro-pericardiac contraction, as the circumstances which principally conduced to render this vessel less able to sustain the shock imparted to it and all the thoracic organs by the man's fall from so great a height?

XXV. November, 1822. — C. D. an active female, thirty-two years of age, possessing an unimpaired constitution and a strongly-marked sanguineous temperament, had been six days delivered of her third child, when she was seized with an acute malady, exhibiting all the symptoms by which phlegmasia dolens implicating the left lower extremity is usually characterized.

On former occasions this woman had passed through the processes of utero-gestation, parturition, and lactation, in the happiest manner; and her last labour was distinguished by every circumstance from which a favourable recovery might be anticipated.

From the first accession of her disease, the patient constantly referred her chief sufferings to an intense lancinating

pain deep-seated in the abdomen, and shooting downwards along the spine and course of the large crural vessels in the affected thigh.

Repeated abstraction of venous blood,* free alvine evacuation, sedative diluents with mercurials, tepid ablutions of the surface, internal refrigerants, assisted by tranquillity and abstinence, were ineffectually opposed to the disease. About noon of the fifteenth day of her illness, when attempting to turn herself in bed, she uttered a faint cry, fell into a state of convulsive panting, which gradually became more and more feeble, and, in less than half an hour, was terminated by the extinction of life.

Dissection. — Fourteen hours after the patient's dissolution, her abdomen was found in a state of extreme tumefaction, and having its surface marked with several livid spots. The left limb, which was greatly enlarged during life, had now shrunk to nearly its natural dimensions. Its integuments seemed to have lost all their fluid elements: they were loose and puckered.

Immediately on its parietal textures being divided, a gush of impure serum issued from the abdomen, all the interstices of which were filled with a thin sanguinolent fluid and coagulated blood. These, to the amount of many pounds, together with the intestines and viscera, being carefully removed, a perpendicular rupture, with irregular edges, and measuring six lines in length, was discovered in the abdominal vena cava, between the first and second joints of the lumbar spine, near the origin of the chyliferous duct.

From their capillary vessels being exanguious and collapsed, all the abdominal, extra-peritoneal, and pelvic organs, with their investing membrane, were pale, and some of them white as tendinous structure. That portion of the peritoneum which lines the lumbar region was remarkably thin, and easy to be lacerated.

The internal surface of the vena cava, from its origin at the conjunction of the iliaes to the point where it receives the hepatic veins, was thickly coated, so as to lessen its diameter, with a straw-coloured, gelatinous deposition, through which many dark brownish spots were interspersed. With this inorganic substance, which could readily be scraped off with the handle of a scalpel, the interior and fibrinous coats of the vessel, especially in the vicinity of the laceration, were

* In this case it was observed that the wounds made in puncturing the median vein did not heal by the first intention. Their lips thickened, became everted, and gave out an offensive sanious discharge.

intimately blended. Its cellular tunic, over the same space, was much thinned, and tore with facility.

Matter of the same kind was deposited, but in a layer of less thickness, on the concave face of the left iliac and corresponding femoral veins, half-way down the thigh, beyond which the dissection was not pursued. The uterine and vaginal veins which terminate in the left internal iliac were filled with it; but, on their being divided, the end of a small probe could, without force, be inserted into their tubes.

The cellular texture of the left thigh was changed into a substance bearing resemblance to the colour and consistence of animal jelly.

In the fundus of the uterus, which had not completed its ultimate contractions, was a shallow ulcer, nearly circular, and twelve lines in its longest axis. It contained a small quantity of fetid puriform matter, some of which adhered to different parts of the utero-vaginal lining. This membrane had lost its natural tenacity, and could be peeled off with the finger.

Immoderate vascularity, or other traces of recent inflammation, could not be discovered on any of the visceral or peritoneal surfaces: all their vessels, both venous and arterial, were empty and collapsed. Notwithstanding the superficial paleness of the liver, however, when an incision was made into it, large drops of dark hepatic blood were emitted by its dissevered vessels.

The mucous coat of the bladder was free from all traces of a morbid state: its serous tissue had acquired the same tinge, and gone into the same condition, as the lumbar peritoneum, being apt to suffer laceration from the slightest force.

With exception of several dark patches on the posterior surface of the small intestines, the alvine canal was healthy, though pale, thin, and in some places transparent. It was inflated with ammoniacal air, which in like manner distended the stomach.

All the thoracic organs appeared in a state of vigorous health. Very little blood issued from the lungs, on their being cut open. A small sanguineous clot remained in the right ventricle: the left, with the aorta, large veins, and, indeed, all the chief branches of the vascular system, were empty, and flattened from collapsion. The encephalon was not examined.

Such are the manifestations of rupture in the vena cava which my limited acquaintance with medical literature and experience in the investigation of disease enable me to place before the readers of this Journal. They will, therefore, be

pleased to regard the preceding sketch as a well-meant, though necessarily imperfect essay, towards completing the pathological history of an organ, on the integrity of whose functions much of the process of vital action depends.

Glasgow, George's Square, July 4th, 1823.

II.

Case of Sloughing Phagedæna, with Remarks. By THOMAS SUTTON, M.D. Member of the Royal College of Physicians, London.

HAVING very lately read an account of sloughing phagedæna, by Mr. Welbank, in the Medico-Chirurgical Transactions, I am willing to state a case of this kind, and its result, which had gone to a most formidable length, with some general observations on the cure of certain ulcers and ulcerations. This I do with much deference to Surgeons, as my professional occupations are not directed, nor much called to surgical cases. This case was one of those that had been connected with syphilis, and was therefore of the precise kind alluded to by Mr. Welbank. The party was a man of about twenty-five years of age, who, at the time I saw him, was reduced to apparently the last stage of emaciation. I was sent for on account of a very considerable vomiting; and when I had seen his reduced state, and the ulceration of which I shall speak presently, the whole gave me very little hope of keeping the patient alive for many days. He, however, seemed more rallied on the following day than I expected, his vomiting having ceased; and as the friends of the patient wished me to continue my visits, I entered fully into all the circumstances of the case. I was informed that the patient had been ill for upwards of two months. This disease first began with buboes in each groin, which had extended themselves into rapid and very enlarged ulcerations. The progress of this disease was much such as Mr. Welbank describes, and the ulcers had increased by gangrenous spots coming on the edges, so as to form a continuous and meeting mass of ulceration of very great extent. This patient had been attended by a very assiduous Surgeon, and had enjoyed the advantage of the advice of an eminent Surgeon from London. But no effort whatever had as yet been able to place the ulcerations in a healing state, nor stop its progress. If any thing appeared to be gained on one day, a gangrenous appearance on the next was sure to destroy the hopes formed on the former. There was, when I saw the ulceration, no

slough of magnitude on its surface, but the edges displayed in all directions irregular indentations, which parts had been lately so formed by small gangrenes. On inquiry, I found that a great number of means had been employed without effect, and that nothing in the general treatment of such a case remained to be done that had not been attempted, and without success. The dressing, such as had been adopted, had been carefully removed night and morning, owing to the excess of discharge, and the parts carefully cleaned from all irritating matter. Under these circumstances, I felt that there could be no impropriety in proposing a plan of my own; and as the ulceration was very extensive, there was an opportunity of trying it on a part only, which I proposed to be done. My plan therefore was this, to place a piece of dry lint doubled upon one half of the ulceration, fastened with adhesive straps as well as could be, and not to remove this for two days. In order to render the discharge as little irritating as possible, and to dilute it, tepid water was to be very frequently applied by a sponge or on hair, and the lint to be thus kept constantly wet; when this could not be done so regularly, poultices were to be applied, which was generally the case at night. In this way the thing was managed, and on taking off the lint in two days, we were gratified in finding the parts looking healthy and in a state of healing, while the other part of the ulceration, not treated in this way, was in a state of irritation. Thus, then, as no doubt could remain as to the preferable mode of proceeding, the last plan was adopted upon the extent of the ulceration; the whole soon healed, and the patient recovered, considering his reduced state, in a rapid manner.

The medical treatment consisted in giving moderate doses of opium; and, after a time, a tonic bitter medicine was directed, and the bowels, as occasion might require, acted on. The diet allowed was such as was likely to support the strength, and with which it was found the stomach could deal the best.

It now will become a question with my readers, as this plan has proved thus successful, on what principle I adopted it, materially varying as this treatment does from the usual practice? I have been long impressed with the idea, and in several instances acted upon it, that the practice of exposing large ulcerations often to the air, as is very commonly done, should, if possible, be avoided. In a certain way Mr. Baynton's plan has shown this, as it consists in reducing the surface of the ulceration as much as possible; and for that purpose, to obtain an union of parts, he recommended the adhesive straps to be removed very seldom. Mr. Alanson's

method in amputations is also of the same kind, which, by keeping the parts in contact to encourage adhesion, reduces the ulceration, after the operation, to a mere nothing. Each of these methods, however, having in view an union of parts, necessarily induced another most useful consequence—the external air was refused admission to the wounded and ulcerated parts. In the operations of nature in cases of wounds, or breaking of surface, at least in the human species, we perceive an effort to cover the exposed living parts—if of moderate size, by inducing a scab; but if this cannot be accomplished, the death of the upper part of a wound or ulceration is effected, and a slough produced, thereby protecting the sensible parts underneath from the irritating effects of the external air. It is for the same reason that sloughs induced by art cause much good, as for some days the living parts underneath are not exposed to the irritating contact of the external air. I am well aware that Surgeons have thoroughly understood that exposure is very irritating to ulcers; but they may have too sedulously endeavoured to keep the parts clean from irritating matter, at the expense of other consequences.

The above case was treated by my advice upon the sole principle of avoiding exposure to the external air, with a happy result. With too little experience to decide so weighty a point of practice, but with the little I have had in this part of the healing art, I should recommend it to consideration, that all reasonable means should be resorted to to hinder the contact of external air as much as possible to ulcerations. I believe this to be often practicable to a considerable extent, by diluting the irritating matter secreted, and rendering it innocuous, without frequently removing immediate applications, and thus giving Nature an opportunity of commencing and continuing the healing process after her own fashion.

Greenwich, September 12th, 1823.

III.

Contributions to Pathology.—No. I. *Case of Tumour within the Trunk of the Vena Porta, completely obstructing the Circulation through this Vessel, &c. &c.* By JOSEPH WARD, Esq. Member of the Royal College of Surgeons, and Apothecary to the London Hospital.

ANDREW RAFFERTY, ætatis thirty-five, first applied for relief January 29th, 1822, stating, that about five months

previous to that period he had felt himself very sick, without having used any exertion, and that he brought up, by vomiting, about a pint and a half of blood; since that period he had spit blood occasionally, and during the last week, once or twice; he had also passed small quantities of blood by stool. His bowels were upon the whole regular; had some degree of tenderness on pressure at the *scrobiculus cordis*; pulse soft and slow. He was ordered calomel and jalap every other morning, and a common saline mixture three times a day. By paying attention to the state of his bowels, and by varying the treatment, according to circumstances, he was discharged convalescent in the following March. A few months afterwards, he again applied for relief, stating, that a short time after his discharge he became worse. He now complained of pain and swelling in the abdomen. His food was constantly returned in about ten minutes after it had been taken; this was always succeeded, in about half an hour, by very violent pain. He has frequent craving for food; abdomen distended with fluid; legs occasionally much swelled; bowels costive; urine very high-coloured; skin has been yellow; pulse regular.

After his admission, he still complained of much pain at the *scrobiculus cordis*. Blisters, leeches, and the usual medicines, were employed without affording any relief; he appeared to be gradually sinking; large doses of opium gave him some ease from pain: he died in October following.

On examination after death, the *stomach* was found distended with a large quantity of fluid. A yellowish tumour, of a pulpy feel, and about the size of an orange, was discovered in the lesser curvature internally. The substance of the stomach about the pylorus was thickened, and contained tubercles or small tumours resembling the large one. The pyloric orifice, in consequence of the thickening of the parts, was nearly impervious. In the *liver* were situated similar tubercles, pulpy, cream-coloured, and of a soft, caseous, or curdy consistence. The trunk of the *vena porta* was filled with a similar tumour, which completely prevented the passage of any fluid through it. The gall-bladder was distended with bile.

IV.

Remarks, by HENRY EARLE, Esq. &c. on Sir ASTLEY COOPER's Reply to his Critical Observations on Fracture of the Neck of the Femur, &c. &c.

TO THE EDITORS OF THE LONDON MEDICAL REPOSITORY.

I BEG leave, through the medium of your highly respectable Journal, to correct an inaccuracy in a critical work which I lately published on Fractures of the Neck of the Femur. At page 41, in alluding to a preparation, contained in Mr. Langstaff's museum, of a case of double fracture within and external to the capsule, I have stated that "firm ligamentocartilaginous union had taken place." Mr. Langstaff has obligingly corrected the error into which I had fallen, and, with his usual liberality, has afforded me another opportunity of examining the preparation alluded to, which I find to be very accurately described by Sir Astley Cooper. On the former occasion when I visited this collection, I had not the benefit of Mr. Langstaff's attendance to explain the individual specimens; and from the short notes which I then made, it is very clear that I must have mistaken the preparation in question. I consider this declaration due to Sir Astley and myself, and shall be much obliged by your giving early publicity to it. At the same time, I beg to observe, that the absence of union in this case does not in the slightest degree invalidate the reasoning which I have employed, and that I still consider that the fracture within the articulation would prevent the motions of the pelvis from being communicated to the fracture external to the capsule; and, consequently, that no comparison can be drawn between the two fractures, as the one within the articulation would be liable to participate in every motion of the trunk and pelvis, while that external to the capsule, from the very circumstance of the double fracture, would be in great measure secured from any such interruptions to bony union. Added to which, it is right to observe, that the central portion between the two fractures, being nearly insulated, would be placed under much less favourable circumstances for union than when connected with the shaft of the bone. These two facts are fully sufficient to account for the want of those reparative effects which commonly take place in simple cases of fracture within the articulation.

I have the honour to be, Gentlemen,

Your most obedient Servant,

HENRY EARLE.

P.S. Since the above letter was written, I have had an opportunity of reading Sir Astley Cooper's reply to my observations in an Appendix to his third edition; and as that work contains many heavy charges against me, it is incumbent on me to endeavour to repel them.

In the first place, I am charged with an attack on the honour and credit of Guy's Hospital. To this I offer my most unqualified disavowal of any such intention, or of the slightest inimical feeling towards any individual connected with it. No impartial person can possibly draw such an inference from any part of my work; unless, indeed, Sir A. C. has so entirely identified himself with that noble institution, that to differ from him in opinion can be construed into an attack upon the whole school. No petty motives of rivalry influenced me in taking the steps which I have followed, but a conscientious feeling that an advocate for the possibility of union within the articulation was imperiously called for. If I had wished to have contrasted one school with the other, I might have strengthened my cause by stating, that the doctrines which I have inculcated are entertained by most of the able associates with whom I am connected, and are taught by the eloquent and highly gifted Professor who has so long been an ornament and support to St. Bartholomew's.

I am next charged with misleading the rising generation with incorrect surgical principles; and Sir Astley is led to exclaim, "Good God! is this written by an English Surgeon?" It is even so, and by one who hopes to have some claim to that honourable title, should he succeed in restraining the rough and useless freedom of examination which he has too often witnessed in these cases, and in establishing in its room a train of more rational and less injurious diagnostic symptoms, sufficiently clear to direct the judgment of any one competent to the practice of his profession.

To the charge of misrepresentation, at page 22, I distinctly plead not guilty, and feel confident of a verdict in my favour. Sir A. C., at page 146 of his large work, lays down certain rules respecting fractures external to the capsule, to which he admits that there are exceptions: then follow three cases in proof of the positions laid down, but, unfortunately, so far from illustrating, they are all in direct opposition to them. When this inconsistency is pointed out, Sir A. C. charges me with misrepresentation, and wishes the cases in question to be considered as illustrative of the exceptions to his rules; and so, indeed, in the next edition, with some trifling alterations and additions, they may be made to appear; but as they at present stand in the first and second editions, there cannot

be any reasonable doubt of their bearing the interpretation which has been put upon them by many other persons as well as myself. If Sir A. C. really intended them as exceptions to his general rules, he should have stated so more clearly and intelligibly; but surely no critic can be fairly chargeable with misrepresentation in consequence of the author's want of sufficient perspicuity. With much greater justice I might complain of the allusion which has been made to the case of fractured olecranon, at page 15, as unfairly and partially quoted. In relating that case I openly and candidly avowed the mistake under which I laboured, with a view to caution others from falling into the same error, by following too implicitly the doctrines of the schools; and I have clearly proved that in the case in question not one of the symptoms existed, which are described by Sir A. C. and other systematic writers. It is not my intention at present to answer the various parts of this Appendix in detail; but having rebutted the several charges which have been brought against me, I shall beg leave to notice a few passages in the Appendix which might lead to a misunderstanding of my work. With respect to the case of Spilling, mentioned at page 14, I had nothing to do with the treatment of him, and believe that but little was done to restore the limb, because it was evident that the patient was dying of a disease in the liver.

The preparation in the College museum, alluded to at page 21, I value so little, that I have not even mentioned it in my work. It was taken from a patient who was burnt to death; and I could learn nothing respecting it, but that she was supposed to have dislocated her thigh, which was never properly restored. With respect to the case of shortening to the extent of four inches, mentioned at page 16, I have only to observe, that the question at issue is respecting the degree of shortening immediately consecutive to the accident. I have myself expressly stated, at page 43, "that in old neglected cases where no union has taken place, there will often be very considerable shortening in consequence of the absorption of the neck within the articulation:" precisely such is the case in the preparation in question; but surely this cannot be gravely brought forward in proof of the degree of shortening immediately after the accident. Sir Astley has employed the man's high-heeled shoe as a gauge; but this is very fallacious, as the direction of the whole thigh would be altered, and the knee would be slightly bent, which would increase the apparent degree of shortening, even supposing the actual shortening not to exceed two inches and a half;

not to mention that some allowance should be made for the thickness of the other shoe.

At page 7, Sir Astley has said that "no argument can ever settle the question of the possibility of union, which can only be decided by observation." This is undoubtedly true; but it is equally so that *the question never can be decided in the affirmative by following the doctrines which he has inculcated, as the practice Sir A. recommends and follows renders union by bone a moral impossibility.* By reasoning, however, I hope that I have shown that there is no actual law in the animal economy prohibiting such union. By reasoning, I have endeavoured to explain the causes which have hitherto contributed to interrupt bony union; and by reasoning, I hope to induce my professional brethren not to abandon these cases as hopeless.

I am well aware that my work is deficient in positive evidence, but I trust that I have assigned satisfactory reasons for the results having been hitherto so generally unsuccessful. If there had existed more positive evidence on this disputed question, the doubts at present entertained could not possibly have been maintained by any person, and my humble pen would not have been required in support of the possibility of union. The present inquiry will, I hope, lead to the solution of the difficulties which have hitherto involved this subject, and to the elucidation of truth — the great end and object of my inquiry. When, however, I find it acknowledged by Sir A. C. himself, that perpendicular fractures through the head and neck of the femur, through the patella, and through the olecranon, will unite by bone, I cannot admit that a different law influences transverse fractures of the same parts. The difference consists in the more perfect adaptation of the broken parts, and the more permanent state of rest, and not in any deviation from the laws of the animal economy. Let us then direct our whole attention to this one object, and by improved means endeavour to accomplish this desirable end. Instead of indulging in angry discussions, and anxiously seeking for additional proofs of non-union, let us steadily exert ourselves in endeavouring to prevent deformity and lameness, and to restore our patients to the perfect use of their limbs. By having pursued this plan, I am happy to say that I can produce several living instances of complete success; and should my own life be sufficiently prolonged, and the prejudices of the public against anatomical investigations not prohibit, I shall hope some day to produce unequivocal proofs in support of the possibility of bony union.

I shall conclude for the present these observations, with

reiterated assurances that I entered on this inquiry as a public duty with much repugnance, and that I feel truly sorry that what I have stated should have created any angry feeling in Sir Astley's mind. In animadverting on that gentleman's work, I have only touched on those parts which were of importance to the subject under discussion, and no unfriendly or personal feeling for a moment influenced my mind.

I sincerely feel, and hope always to feel sentiments of respect and regard towards that gentleman, and of cordial good will towards my professional brethren who are connected with the excellent school of which he is so distinguished a member.

George Street, September 13, 1843.

V.

Case of Anasarca successfully treated by Acupuncture. By
JOHN TWEEDALE, M.D. Lynn-Regis, Norfolk.

IN the absence of the Physician who had been in attendance for some months, I was requested, on the 1st of August last, to visit Mrs. —, of this town. I found her labouring under anasarca, in a very advanced stage; the cellular membrane of the upper and lower extremities and trunk being enormously distended with fluid, accompanied with cough, and most distressing dyspnoea.

Various diuretics and cathartics had been administered, but without benefit.

I prescribed still more active hydragogues, a blister to the chest, and saline pediluvia.

On the following day, the family Physician having returned from the country, I met him in consultation, when it was determined to continue the plan recommended by me on the preceding day.

Several days having elapsed under very active treatment without any material relief to the patient, I was induced to recommend a trial of acupuncture. That operation was readily submitted to, and was performed with a common needle of middling size, guarded with a small piece of sealing wax at the eye, to prevent injury to the Surgeon's finger, and with a thread passed a few times round the needle, at rather less than a quarter of an inch from the point, in order that the punctures might not exceed the depth required. With a needle thus guarded, about a dozen punctures were made in

each leg, within a very few minutes, and with little or no pain to the patient.

The result has been most satisfactory: the arms and trunk were, in the course of a week, reduced to their natural size, and nothing now remains but slight œdema of the ancles and feet. As the punctures had closed, the operation was repeated with a triangular-pointed (small glover's) needle, which enters the skin more readily, and leaves a more permanent puncture than the round-pointed needle.

Scarifying and puncturing with the lancet are not only more painful operations, but are not unfrequently followed by unpleasant consequences. I am of opinion that the method above described may, in almost every case of anasarca, be resorted to with perfect safety, and with, at least, temporary relief to the patient.

At the time this case occurred, I was not aware that Dr. Sutton and Mr. Finch had tried acupuncture in anasarca cases; but I am happy in adding my testimony to theirs, not doubting but that this simple operation will be found a most valuable auxiliary in the treatment of anasarca.

Lynn-Regis, Norfolk, September 8th, 1823.

VI.

Case of Hydrocephalus Chronicus, in which Pressure proved most beneficial. By J. F. BARNARD, Esq. Bedford, Member of the Royal College of Surgeons, London.

FROM the fatality so commonly attending chronic hydrocephalus, now so frequent among children, I have been induced to submit to the readers of the *REPOSITORY* the following case:—

A child, about a year and a half old, was born, to all appearance, perfectly healthy, and continued so until six months old, when the head was first observed to increase in size. I did not see it until the disease was so far advanced that I almost entirely despaired of its terminating favourably. The head was exceedingly large, weighing, I should think, nearly as much as two-thirds of the rest of the body. The child lay in a state of stupor, and was unable in the least degree to move its head. There were a slight strabismus and rolling of the eye-balls, and almost constant startings of the muscles of the whole body, but more particularly of the face. The countenance had a cadaverous appearance, and the skin was of a yellowish colour. The eyes were sunk in their sockets, and enclosed in a dark ring. The flesh was

flabby, and seemingly hanging on the muscles. The evacuations from the bowels were particularly unhealthy; sometimes green, sometimes blackish, but never of a healthy colour; nor indeed had they been healthy since half a year after its birth. The tongue was constantly covered with a thick white coat. When its head was moved it screamed, and seemed sensible of pain. I expected the child would survive but a few days. [I should say that it had been taking purgatives and mercurials, without benefit, for some time before I saw it.] I communicated my opinion to the parents, and told them the only chance I saw of saving their child was a plan which I shall describe, and which they readily assented to.

I had the head shaved perfectly clean: I then applied broad strips of adhesive plaster completely round the head from before backward, and cross strips from one side to the other, so as effectually to support the parietes of the cranium. I ordered the whole head to be kept constantly covered with linen dipped in cold water; and that the child should take no other medicine than a little castor-oil, should the bowels require it. Having thus decided on my practice, I patiently waited the result. Its good effects were evident in less than a week: the little patient could move its head much better; the strabismus had disappeared; the secretions from the bowels were more healthy; and the startings of the muscles were less frequent. He had not screamed on rolling or moving the head since the bandage was applied. In a fortnight the size of the head had evidently lessened; the child was more lively, and began to take notice of the persons around it; the secretions from the bowels were perfectly healthy and evacuated regularly; the tongue nearly clean, and the skin of a natural colour; and the countenance more composed and animated. It is now two months since the bandage was first applied; and the child is in every respect healthy, except that the head still contains water, and is larger than it ought to be. The flesh is firm, and the skin of a healthy mottled hue. The water, I have no doubt, will in time be absorbed, and he will completely recover. I shall recommend the bandage to be worn until the bones are fully united.

As this disease generally attacks more than one in a family, I have advised that the younger children should wear a small roller bandage on the head to support it during the time the bones are forming, and until they are perfectly united. If this were done more generally, as it used to be, I have no doubt it would prevent many of those dreadful cases of hydrocephalus we find in the present day. It is allowed by medical men that the disease is more frequent now than formerly; and to what greater cause can we ascribe it, than to the omitting

of the application of that kind of bandage which was usually employed to protect the head of the infant from injury, and to support its imperfectly ossified and yielding parietes.

That this child was greatly relieved by the manner of bandaging which I employed, and that alone, I firmly believe. In order to ascertain more accurately the efficacy of this practice, I ordered that the child should take no medicine,—not even the castor-oil, unless it was absolutely requisite. It was necessary to give it small doses of the oil, but not oftener than once or twice a week, and that in the very outset of the plan. Its principal food during the cure was eggs and milk; I also allowed it a very small quantity of wine as a stimulant to the stomach.

Bedford, July 23d, 1823.

VII.

Cases in which Fumigation proved a successful Auxiliary Remedy. By POWELL CHARLES BLACKETT, Esq. Member of the Royal College of Surgeons.

FROM the opinions of some medical friends agreeing with my own on the efficacy of fumigation, I have been induced to avail myself of the advantageous opportunity *which has lately offered itself to the Profession*, of trying it with some of my patients whose cases appeared likely to be benefited by the remedy. I have reason to be much satisfied with the result; and am induced to give a short abstract of those cases in which I have had an opportunity of employing it, as it may be the means of directing the Profession to an auxiliary remedy in those obstinate chronic cases which are occasionally found to be not much under the control of the usual modes of treatment: and as fumigations are not only safe “when properly administered,” but frequently efficacious when little expected, I trust it will not be considered an act of temerity, on my part, to draw the attention of the Profession more particularly to this mode of practice.

Case 1st.—My friend and neighbour, a general medical Practitioner, had been afflicted with sciatica nearly five years. There was no wasting of the limb affected, and the pain always was diminished on taking exercise; but when he came to sit for half an hour after his usual rounds of the day, stiffness and pain returned, and his nights were not uncommonly passed in extreme torment, which could not be allayed by opiates, frictions, warm bath, or any of the accustomed remedies in such cases. He was induced to try the sul-

phureous baths, as administered by Mr. Green, of Berry Street, St. James's—he took but four of them. Six weeks have elapsed, and he has had not the least return of pain, notwithstanding the variable state of the weather, which always aggravated his complaint.

Case 2d.—Mr. M., a respectable tradesman, near Regent Street, had for many years been afflicted with gout, of the atonic kind, accompanied with all the varying symptoms frequently attendant on this disease. He had been confined from last December until May of the present year, almost exclusively to his bed-room. Being a corpulent man, he required considerable assistance to move himself, or his swollen extremities, when in bed. When he was able to get up, he required the aid of two persons to help him to his chair; and he considered himself tolerably well if he could reach the window by the assistance of crutches. It was with difficulty he got into a coach to go to Berry Street and try the sulphureous fumigations, as he had been recommended. He found himself better even after the first bath. He took one every other day; and when he went to the fourth, he walked with the aid of a stick only. After taking the seventh, his amendment was so considerable, and the swelling of the legs so much diminished, that he was able to wear boots. He took altogether eleven of the sulphureous fumigating baths; and ten weeks have now elapsed without any return of his malady. This patient took no other remedies than a common aperient during the use of the baths.

Case 3d.—A gentleman, seven months previous to the use of the baths, had had a severe attack of hepatitis, which was subdued by the usual means. In consequence of the attack, there remained much torpor of the liver, with evident enlargement: he was also much emaciated, and very weak. He complained of constant lassitude, of headach, and of thirst. His tongue was white and furred, and his pulse irregular. His skin was dry and unperspirable; indeed he had not perspired since the commencement of the attack. He had little or no appetite, and his complexion was sallow. In addition to the usual treatment in chronic hepatic disease, which was continued for some time with but little advantage, he was advised to try the sulphureous fumigations, with a view of restoring the functions of the skin. He found himself relieved after the first bath, and he continued moderately to perspire during the following night. After three or four applications of this practice, his general appearance was much improved. He could with comfort lie on his right side, which he had not been able to do from the commencement of his illness; in short, he was so much improved that it was considered

a visit to Cheltenham was all that was necessary for his recovery.

I have employed this remedy in several other cases, apparently with equal success; but as sufficient time has not yet elapsed to ascertain the permanency of its effects, I shall defer any account of them until a future opportunity.

Park Street, 20th August, 1823.

VIII.

A Description of Trephining Instruments, upon principles entirely new, which are calculated to secure confidence to the Operator, by removing all apprehension of injuring the Brain, and are applicable to uneven Surfaces; and which are submitted to the attention of the Medical Profession. By FREDERICK WILLIAM MORRIS, of Halifax, Nova Scotia, Student of Medicine at the University of Edinburgh.

[With a Plate.]

HAVING witnessed, upon a few occasions, some anxiety on the part of the Surgeon engaged in the operation of trephine, when approaching the dura mater, and sometimes a degree of difficulty on the first application of the instrument, these circumstances excited my attention and reflection, and the result has been the construction of the instruments which I am now about to describe and to recommend to the Profession. Allow me, therefore, to solicit the attention of those who are interested in the advancement of surgical science to the examination and practical application of them. I need scarcely observe, that no mind, possessing enlightened views, will for a moment suppose an invention of this nature in any way derogatory to professional attainment; for it must be allowed that, in operations on the cranium, although anatomical knowledge and manual dexterity may do much, still much may also be accomplished by well-constructed instruments. As the various instruments hitherto invented for operations of the nature in question are unknown to few, I shall now take the liberty of describing those in reference to this notification; and here I beg leave to return my sincere thanks to those gentlemen to whom I had first the honour of submitting the instruments for inspection, particularly to Dr. Ballingal, Mr. Allan, and Mr. Lizars, of Edinburgh, and Mr. Guthrie and Mr. Grainger, of London, whose kindness and encouragement I so freely experienced.

Fig. 1st. The common, or Hey's saw. A, The handle. B, The shaft of the instrument, which is admitted by a screw into the brass plate, C, embracing the saw, D, and which

Fig 2, Reversed,
Fig 3.

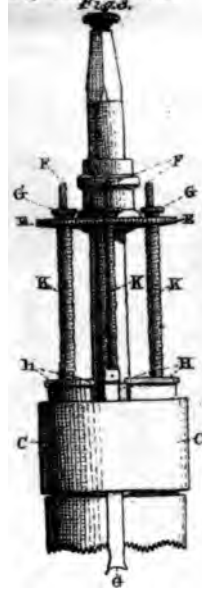
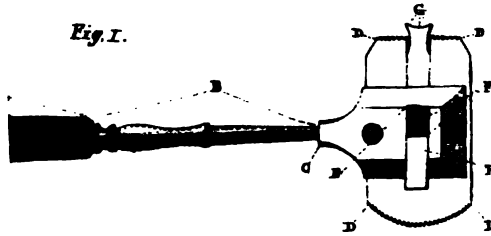


Fig. I.



for TREPHINING

ed by

WILLIAM MORRIS,

of

NOVA SCOTIA,

University of Edinburgh.



Fig. 5

plate has an opening, E, admitting a spiral spring, F, to supply an index, G, which (unless in operation upon a surface where there is no hole or opening) is kept in a projecting state beyond the line of the cutting surfaces, DD, by the above spring, F, which spring is concealed by closing the slide, H, a corresponding slide being on the opposite side. It is evident, then, that when the instrument is in operation upon any surface where the resistance is equal, the index G will be upon a level with the cutting surfaces, DD, on each side of the index, as it retires within the brass plate or box, C, by the resistance offered; but the moment the cutting surface of either side has perforated, and thereby removed the resistance, the shoulder or oblique corner of the index will project obliquely into the opening; and lest even this mode of entering the opening should injure the membrane beneath, the spring possesses strength sufficient only to keep the index in a state of projection. It will be advisable for the Surgeon to use the other side of the instrument until he has made a line or groove, by which he will be enabled to use the index side with greater facility. It may not perhaps be unnecessary to add, that the smaller the extent of the cutting surface of the instrument, the greater will be the delicacy of the operation, as by diminishing such surface the Surgeon may operate upon any space, however small. We have now to apply this principle to the circular saw, *Fig. 2*, with an addition to admit of its operation upon unequal surfaces.

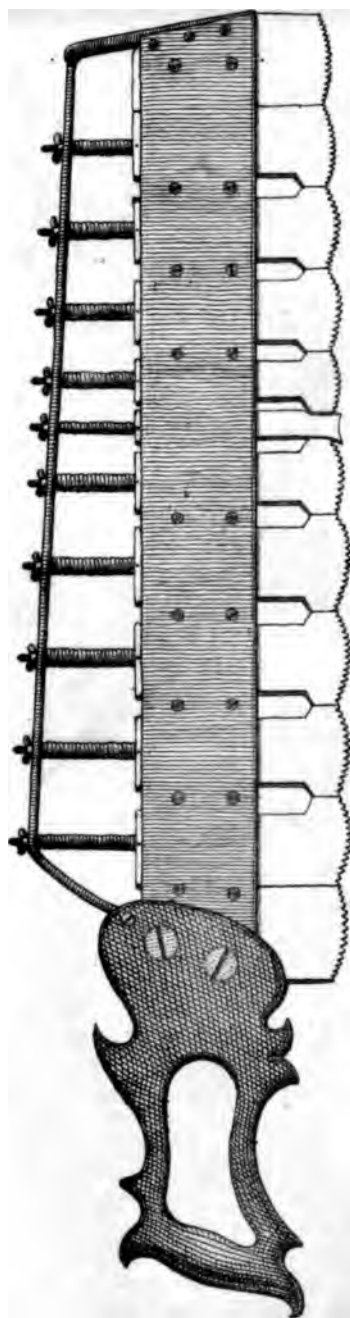
Fig. 2d. A. The common trepan handle, shown by *Fig. 3*, which is admitted on to the shoulder, upon the shaft B of *Fig. 2*, and secured by the screw previously removed. B. The shaft screwed into C, a box formed of two brass semicircles, and connected by partitions of the same metal, to allow the saws, DD, to slide in; which saws are of a convex shape, lest too great a perforation should be made before the index could perform its office or arrive at the opening. E. A semicircle (fastened to a sliding circle upon the shaft B) corresponding to the box, C, which is of this form, and perforated at three points, by the pillars, FFF, which are secured by means of the moveable female screws, GGG, above, and to the saws, DD, by means of the bridge and pins, HH. Those portions of the pillars between the semicircle, E, and the bridge, and attached to the saws and index, I, are concealed by spiral springs, KKK, viz. three within one another on each of those supplying the saws, and one on the pillar which supplies the index. The reason of this will appear obvious, for by such an arrangement we have the elasticity of three different springs over the cutting surface, by means of which the saws will rise and fall with more regularity and

certainly over inequalities ; whereas one is only requisite to keep the index in its proper state of projection. In the middle of the circle (embracing the shaft to which the semicircle, E, is attached) is a male screw serving to fix the circle upon any part of the shaft, B, increasing or diminishing the power of the springs, according to the distance which is allowed between the semicircle and saws, or, in other words, by pushing the circle towards the saws, and fixing it by means of the above-mentioned male screw ; the springs are thereby contracted and increased in power, and by the reverse are lengthened and suffer a diminution of power. It will also appear evident that, by screwing down the nuts, GGG, either the index or saws may be withdrawn, according to the wish of the operator. L is a screw attached to the centre-pin, M, as in all other instruments, but is not allowed to extend more than to within about the eighth of an inch from the cutting surface. To operate with this instrument (which resembles the common trephine divided longitudinally), in the first place, loosen the screw, E, and slide the circle towards the handle of the instrument, by which means the shoulders of the saws are brought close up to the box, C ; thereby allowing the centre-pin, K, to project, with which, by two or three turns of the handle, a hole is made sufficient to regulate the motion of the instrument upon the part ; return the circle again to its former place, which will enable you to use the saws ; by now pressing until the point comes in contact with the skull, the saws will be found to have adapted themselves to the part, and at every turn this will be more complete ; they will now be seen rising or falling according to the prominences or depressions in the part. When the Surgeon finds himself checked by the index, he must remove the saw from that part, and continue the operation on the part directly opposite, by a semi-rotatory motion of the handle, which will be found perfectly easy ; and, of course, at every succeeding perforation, the motion will become more limited.

Fig. 4th only differs from the other instruments in being a perfect circle, and having the index supplied by means of the brass bridge, A, which gives off the small spring for that purpose from its centre ; each end of the bridge being fastened to the saws, as in the other instruments.

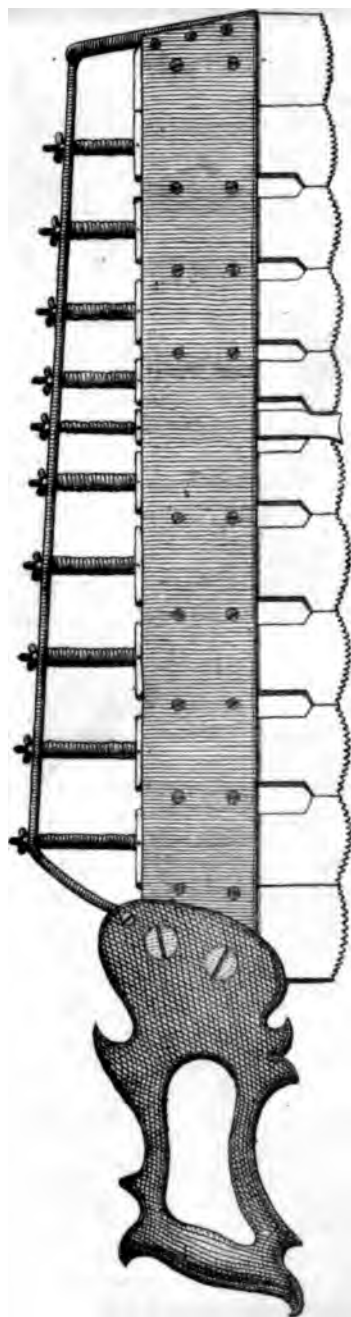
These principles, when applied to the straight saw for displaying the brain, by embracing a great extent of surface, give a decided advantage, and form a beautiful and perfect instrument, which I shall introduce at a future period. The index is applicable to all forms of instrument for sawing. The semicircular instrument, or *Fig. 2*, I think preferable to the circular one, as being a more simple and convenient one,

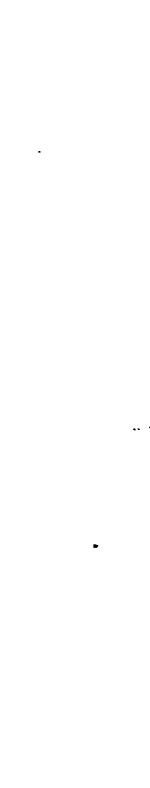
STRAIGHT SAW FOR REMOVING THE CALVARIUM.





STRAIGHT SAW FOR REMOVING THE CALVARIUM.





rendering unnecessary the trouble of withdrawing any of the saws. A better proof of the delicacy of *Fig. 1* cannot be given than my having exposed half an inch of the Schneiderian membrane in the frontal sinus of a sheep's skull, without rupturing it at a single point, which many young men witnessed.

PART II.

ANALYTICAL REVIEW.

I.

An Exposition of the Principles of Pathology, and of the Treatment of Diseases. By DANIEL PRING, M.D. Member of the Royal College of Surgeons. 8vo. Pp. 512. London, 1823.

IN our former article* on this work we analysed its three first chapters—we now proceed to review *Chapter IV.* in which Dr. Pring examines the “pathology of the determination of blood.” After a minute analysis of the phenomena of the circulation, he concludes that these phenomena cannot be explained by referring them to the functions of the heart exclusively; but either, 1st, that the vital properties of the vessels, by an immediate influence upon the blood contained in them, assist in the transmission of this fluid throughout their respective systems; or, 2d, that this end is promoted by a function of the capillaries. Under the former of these heads we find some very conclusive arguments in favour of the position, that whatever properties are presented by the blood, and which fit it for the purposes of the circulation, and are essential to this purpose, are derived from the vessels within which it circulates—a position which we have uniformly maintained; and, moreover, we have maintained that such properties emanate from that class of nerves which are distributed to the blood-vessels, and which, through the medium of the vessels, influence the fluids which flow in their channels. Dr. Pring's arguments respecting the various functions attributed to the arteries admit not of abridgment: we recommend them to the attention and examination of our readers.

* LONDON MEDICAL REPOSITORY for July 1823, p. 66 of this Volume.

He next examines the different morbid phenomena, on which the doctrine of determination of blood is founded, and very properly disapproves of the manner in which general inferences have been unwarrantably deduced from them. This part of the author's remarks is illustrated by some interesting cases. Here again we are happy to find him corroborate the opinion which we have always espoused. "Thus it appears," he observes, "agreeably with the strongest and most unexceptionable testimony, that the determination of blood to a part is a *consequence* of the assumption of a state of disease; that it is a part of a diseased state, which it helps to establish; and that it can be at most but auxiliary to the other causes involved in the condition of disease, in deciding its varieties and duration." The following paragraphs enunciate still more clearly a proposition, which every one must admit who looks closely into the nature of disease:—

"In a state of perfect health, there is an equal distribution of blood to the different structures, which distribution agrees with their vascularity, and corresponds with their organization and functions. Now, as the blood is passive, it is obvious that the equal distribution of it depends upon a healthy state of the powers by which it is moved, and on which its distribution depends. If this is granted (and I presume it will not be denied), it follows that an unequal distribution is the result of an unhealthy or disordered state of the organs upon which its distribution depends. If, then, a part obtain an undue quantity of blood, this excess of blood cannot be *the cause* of the disease, because disease itself must *precede* its occurrence. Thus the presence of an increased quantity of blood must be dismissed as the cause, since it is proved to be the effect of disease."—P. 152.

"If the state of disease acknowledged only one cause, the condition of disease would be the same under the existence of the same cause; and if disease show any varieties in its course, they must originate in a different state or degree of this cause, and should be, in their series, expressive only of its varieties. But the state of disease is not, in fact, so simple: it must acknowledge a complication equal to that of the properties which concur to produce the structures, to support their life, and to maintain their health. This complication is shown by every diversity which is observable, whether by a gross and general view, or by the minutest scrutiny with which the subject can be regarded. The properties which produced, support, and renew the brain, are different from those which perform the same offices in regard to the structure of the eye: the same is to be said on a comparison of all the textures, the muscles, the bones, the arteries, the veins, the lymphatics, the nerves, the membranes, glands, viscera, &c. Every different arrangement in the constitution of an organ, the constituents themselves of organs, their products, the fluids compared with each other, all furnish proofs of the operation of a diversity of properties: from which immense concurrence results the harmony of a system in this particular example; as by a similar

co-operation of endless constituents, the general harmony of nature is preserved. Now, if the causes on which health depends are so numerous, shall it be said that disease, which is a deviation from health, and in which all these properties are liable to be interested, acknowledges only one cause; or that out of our endless variety of causes which concur to an effect, one only shall have the privilege of suffering a change?" — Pp. 155, 156.

We cannot follow our author through his very interesting illustrations of the fundamental principles which these positions involve. Nor can we regret the omission, since we are conscious that every one who is desirous to look closely into the phenomena, which it is the business of our lives to comprehend and to combat, will peruse, and will be interested by, the speculations which the critical, and other chapters of this work contain.

We shall now give the conclusions which the author has arrived at in his examination of the fundamental principles of the doctrine of the determination of blood.

" 1. That a part cannot obtain a preternatural quantity of blood by the exertion of any power which belongs naturally to the arteries.

" 2. That the ascertained powers of the arteries, viz. their tonic and elastic powers of construction, may be overcome by the causes which produce determination of blood.

" 3. That a preternatural determination of blood, although a general accompaniment, is not found to be an invariable one of disease, in seats where the evidence of such determination has been looked for.

" 4. That a determination of blood is occasioned by a local state of the structure, and cannot be produced by any action of the heart, which must be equally relative to the whole vascular system, or by any condition of this organ, except such as presents mechanical obstruction to the passage of the blood through its cavities.

" 5. That the determination of blood does not *commence* disease, or is not the antecedent of this condition.

" 6. That determination of blood is preceded by the assumption of a state of disease, which is denoted by symptoms; which state of antecedent disease, merely as it requires some term, may be expressed by the words, irritation or excitement.

" 7. That as the recognised powers of the circulation are inadequate to account for this phenomenon, the concurrence of a function of the secerning system has been supposed necessary to this end.

" 8. That the secerning system consists of the terminations of arteries, which separate fluids from the blood, by an affinity with these fluids, which is an exertion of the properties of life.

" 9. That this function constitutes a power of attraction at the extremity of the arteries, which helps to carry the blood through its course, and is at once auxiliary to the heart in the circulation of the blood, and a centre of the power which makes nutrient fluids pervade

the molecules of the structures, and is also capable of compelling their return through the absorbents into the system of the blood-vessels; although it is probable that the absorbent orifices have a similar function, which gives additional strength to the *vis à tergo*, by which fluids might be otherwise conveyed through them." — Pp. 163—5.

Having drawn these inferences from an examination of the physiological principles of this doctrine, Dr. Pring next analyses in detail its application to the explanation of the phenomena characterizing various diseases. At this place our readers will find acute and profound disquisition, frequently interwoven with most excellent practical observations; and here we may remark, that the practical precepts and deductions of so close a thinker as our author, come before us with more than ordinary recommendations, and are quite of a different character from the vaunted experience of many — the carelessly observed — the loosely and vaguely related, *facts*, as their authors are pleased to call them, but which are only empirical notions improperly dignified with the name of experience.

Before passing on to the analysis of the explanations of disease furnished by this doctrine, Dr. Pring illustrates, at some length, his opinions respecting increase of the function of the secerning system, which he supposes to precede the more prominent phenomena characterizing local determination of blood. He considers this increased function of the secerning system to give rise to a greater derivation of the fluids which permeate it, and consequently to occasion an augmented flow through the arteries which supply it. The vessels which subserve the secerning function are not, in his opinion, necessarily those which open on the surface, but those which pour their fluids into the interstices; the minutest molecules of which they permeate, and after having accomplished their share in the business of nutrition, renovation, &c. are forced by a *vis à tergo*, or drawn by another action of the affinity of life, into the system of the absorbents. Having thus stated his fundamental proposition, Dr. Pring next applies it to the explanation of some of the phenomena characterizing the early stages of disease, &c.

"Those properties of the structure which are most under preternatural affection, or in the highest degree of excitement, will derive and consume the largest proportion of the materials which are supplied to them, by the increased energy of the function by which they are separated from the blood; and an order of vessels, opening superficially, whose business it is to effuse fluids on the surface, and to derive from those which supply the components of the textures, will be deprived of fluids so long as the excitement of other properties shall preponderate, and will relieve the internal structure, or diminish

the fluids which permeate them, when *their* function is either additionally excited, or when the excitement of other properties is diminished." — P. 174.

"Thus, in inflammation of the liver or of the kidneys, the excretory function of these organs is diminished: the balance of excitement being not in favour of that order of vessels whose business it is to excrete, but of those which are to feed the diseased condition, the properties of which have their seat in those structures whose demand is for the materials of nutrition. But the secreting function of the vessels of excretion of a structure are sometimes the seat of irritation or preternatural excitement, and we find diseased states accompanied by determinations expressed by an increase of the secretions proper to glands or membranes, as those of the liver, kidneys, peritoneum, or internal coat of the intestines." — P. 175.

Dr. Pring considers that preternatural excitement of the capillary distribution of one considerable artery, deriving blood to this seat in considerable quantity, if exclusive and not counteracted by a general diathesis, will deprive, in a proportionate manner, the contiguous vessels of their usual proportion of this fluid. He very justly supposes that the increased derivation of blood by the extreme vessels is not the only way in which the state of irritation secures to itself a supply of this fluid, and induces subsequent disease. In most local diseases the action of the heart is quickened, and thus the supply of arterial blood rendered more rapid. Although, in many cases, the accelerated action of the heart frequently appears synchronous with the determination of blood in local diseases, he considers that, if the succession of phenomena be scrutinized, it will most commonly be found that the state of irritation in the seat of local disease precedes the accelerated action of the heart, and that the cause of this action is a sympathetic extension of the state of irritation from its seat to this organ. He, however, by no means intends to preclude the heart itself from the ability of originating disease.

"It frequently happens," Dr. Pring observes, "in acute inflammatory disease, as of the lungs, liver, &c. that, as the rapidity of the pulse abates, the superficial secretions commence or are increased. The diminished action of the heart in such cases proves a diminished energy or excitement in the seat of the local disease, which we have supposed to be in those minute spheres of the structures which are supplied by the nutrient secreting system, an abatement in the energy of which admits an exertion of the function of the excretory vessels, which were before deprived of their fluids by the preponderating energy of those belonging to a connected system. I am not aware of any other way in which the facts just adverted to can be connected with any physiological distinctions, than by supposing that the excess of excitement preponderates in one order of vessels, and that the function of another order of vessels comes to be exerted, when this

excess is moderated, and the energy or excitement of the two systems rendered more equal." — P. 183.

We must refer our readers to the work for a full illustration of the view which these paragraphs involve, and pass on to notice some practical observations which the author has adduced under that part of the chapter wherein he examines the comparative merits of the treatment which the pathology of determination of blood suggests. This examination is conducted with great ability, and with a strict reference to the author's enlightened experience.

Our author considers that we have been apt to confide too much and too exclusively in the effects of blood-letting in inflammatory diseases, and to neglect other means. In pneumonia he has commonly found that two bleedings, of twenty ounces each, within the first thirty hours, with perhaps a bleeding of eight ounces on the third day, and two or three smaller ones, of five or six ounces, in the course of the disease, has done all that was to be expected from blood-letting. He has had reason to think that repeated copious bleeding has kept up or increased the accelerated action of the heart; and the fatal cases which have come to his knowledge have been chiefly those in which blood-letting had been solely confided in, and therefore carried to a greater extent, without being aided by means which are certainly equally powerful in subverting inflammatory action, such as nauseating, emetic, and purgative remedies, together with doses of nitre from a scruple to half a dram.

Of mercury, to the extent of salivation, in consumption not arising from tubercular formations, Dr. Pring is disposed to speak favourably. He does not approve of bleeding in this disease, and he is not much inclined to recommend setons, issues, and perpetual blisters. He next adverts to the fatal consequences which sometimes result from too large evacuations of blood in rheumatism.

"I have heard," he remarks, "of cases in which death was supposed to have happened from effusion into the pericardium, in which this practice had been pursued unsparingly. I never myself met with a fatal case of rheumatism, although I have met with many severe ones. In some instances I have taken very little blood, perhaps not twenty ounces in the course of the disease, from observing that the symptoms were much more decidedly influenced by purgatives with calomel, elaterium, aloes, salts, senna, squills, &c. together with full nauseating doses of emetic tartar and ipecacuanha, which sometimes produced vomiting, &c. . . . The benefits of purging have appeared to me more decided than those of blood-letting, more particularly in the middle or chronic stages of the disease." — P. 214.

Dr. Pring relates some very interesting cases illustrating

the practical precepts which he here inculcates. He mentions having found chronic rheumatism of considerable duration yield, after bleedings had been premised, to alterative doses of calomel with sarsaparilla. He also remarks that it is possible to produce syncope, in many inflammatory diseases, only by the use of combined purgatives and emetic tartar; and that the reduced action thus produced is more permanent than that which succeeds syncope produced by blood-letting. Here, however, Dr. Pring wishes it to be understood that his objections are not offered to a proper and a judicious use of blood-letting, but to an entire confidence in it, together with a neglect of other means.

In peritonitis, also, he has trusted much more to purgatives than to bleeding, and he has never had reason to regret this confidence; for out of many cases he never met with one that terminated otherwise than favourably. He considers it the first object in inflammation of the bowels, whichever coat may be the seat of it, to overcome the constipation with which such inflammatory disease is commonly or frequently attended. The secretions which purgatives excite throughout the intestinal canal have, he justly supposes, a beneficial influence over the disease. Dr. Pring reasons with much force against the idea that purgatives are hurtful in enteritis, because they act by stimulation. "It does not follow," he observes, "that an agent which is related with a secreting function, so as to increase it, should also be so related with inflammation (which frequently suspends secretion) as to augment its intensity. On the contrary, it would appear that if secretion is suspended by inflammation, that which restores secretion must diminish inflammation." Setting reasoning aside, and reverting to experience, he suspects that in the cases in which purgatives have been supposed to increase intestinal inflammation, it is because these means were inadequately employed. Notwithstanding the vomiting attendant on enteritis, and although he has generally bled in the beginning of the treatment, he has never rested until he has opened the bowels; and he has given the most active purgatives again and again, after their repeated rejection by vomiting, with the auxiliary of soap and other enemas, until an effect upon the bowels has been produced. After this has been obtained, he has never found bleeding necessary afterwards. A little blue pill and aloes at bed-time, with a draught of senna, salts, &c. in the morning, will, he believes, prevent inflammation in the progress of the case, and dispose the bowels to recover their healthy action.

Dr. Pring has found puerperal peritonitis generally do well under adequate purging. He has premised bleeding, but

never carried it to a great extent. All the fatal cases of this disorder which have come to his knowledge have been those in which the treatment has been rested on bleeding, to the neglect of other remedies. Leeches and blisters are useful auxiliaries. What he knows of oil of turpentine in this disease is favourable to the adoption of it. In cases of intestinal inflammation, after the failure of other means, he has given ten grains of calomel every six or eight hours; a salivation has followed this *dernière ressource*, with copious stools; and a favourable convalescence has afterwards been maintained by purgatives of the weaker sort. When peritonitis is attended with diarrhœa, he considers the purgative practice not the less essential—the means, however, should be less violent than in its costive form.

In phrenitis, from local injury of the head, Dr. P. views blood-letting as having a more decided control over the symptoms than any other measure. Purgatives and nauseating doses of emetic tartar are very important auxiliaries: cold applications to the head are also requisite.

On the subject of apoplexy we meet with many very judicious observations, for which we must refer our readers to the volume. We may, however, remark, that Dr. Pring considers that blood-letting, as a remedy for this disease, is in some, though not in all cases, overrated. In illustration of the operation of this remedy he cites several very important cases.

"Blood-letting," he observes, "in apoplexy, as a means of cure, is indicated both by principle and experience to a certain extent; but it is suggested by many results, that although bleeding to a certain extent may relieve the vessels, and tend to produce a more equal circulation, an excessive loss of blood is commonly itself productive of an irregular circulation, and will therefore tend to increase it where it exists, and perhaps will also concur with the tendency of the disease to a rupture of vessels, by diminishing the power which these structures possess of resisting the impulse of the blood."—P. 237.

Dr. Pring very justly considers that epilepsy may be often prevented by occasional bleeding and great temperance in diet; but if the disposition to epilepsy is accompanied by chronic symptoms of affection of the head, these symptoms are not mitigated, but frequently increased, by a course of depletion, which might be instituted for their cure. For some good remarks on some chronic and nervous diseases of the head, we must refer our readers to the work.

"Blood-letting in hæmorrhage from the lungs may, if employed with discretion, be highly beneficial; but, as in affections of the head, if carried to a great extent, it is likely to increase, rather than diminish, the unequal distribution of blood, and the seat of preternatural

determination in this, as in other instances, suffers additionally from this effect." "I have reason to think saline purgatives, with sometimes calomel, nitre, tartar emetic, ipecacuanha, &c. more effectual in hæmoptysis than repeated blood-letting." — P. 254.

Nauseating doses of emetic tartar he considers as serviceable; but vomiting he views as a hazardous practice. It should be recollected that, when the blood taken in hæmoptysis is buffed, our practice should be energetic, as the disease then evidently tends to rapid disorganization. "Bleedings of sixteen or twenty ounces, calomel, active saline purgatives, full doses of nitre, squill, ipecacuanha, emetic tartar, &c. should be employed in the beginning, together with perfect repose." This part of the work contains many judicious observations on the treatment of this disease, to which our limits prevent us from referring. The same may be said respecting Dr. P.'s remarks on disorders of the heart.

"Hydrothorax and effusion into the pericardium are less successfully treated by bleeding than by purgatives; of course, I speak only of what has happened in my own experience. The effects of purgatives in relieving patients from the pressure of fluid on the heart, lungs, and diaphragm, are almost magical." — P. 268.

"Idiopathic dropsy, or that supposed to arise merely from preternatural fulness of the vessels of the peritoneum, commonly yields to purgatives, as of calomel, elaterium, cambooge, with perhaps large doses of squill, and small ones of digitalis." — P. 270. "I believe mercury will very frequently cure the disease (dropsy), if this remedy is carried to a great extent. But it is often difficult in this, and other local diseases of a fixed character, to make mercury produce its usual effects; and upon its producing salivation, I have reason to think its curative operation depends. Not that the mere salivation is of any use; but it is an index of a more general affection." — P. 271.

This part contains some excellent illustrations of the treatment of dropsy, especially a most instructive and ably managed case, which our limits cannot admit. Our author's explanation of the operation of mercury on the function of the liver is the most satisfactory which has been offered: our readers will find it at page 277.

Chapter V. Origin of disease in the abdominal viscera. — Dr. Pring admits that, although the universal origin of disease in the digestive organs, as a pathological doctrine is false, still the digestive organs are often primarily affected in disease. The affection, however, of these organs, he considers to be generally that of relation. From this consideration, he classes disorders of the digestive organs — I. into those which are exclusive — II. into those that are related.

The first class neither requires nor admits of subdivisions. Dr. P. considers that exclusive disorder of these organs is

not very common. He cannot remember to have met with more than three or four cases in which disorder in these seats appeared totally unconnected with other disease. The subdivisions of the second class, which Dr. P. has assigned are —

1. Disorder originating in the digestive organs, and producing disease elsewhere, by simple extension. To this class belong some forms of chronic fever, occasional erysipelas, some kinds of ulcers, &c.

2. Disorder originating in the digestive organs, and ceasing by the occurrence of disease elsewhere. Cases of this kind are not very common. Dr. P. has known consumption preceded by severe chronic dyspepsia (which he considers more infrequent than is generally supposed), the symptoms of which have ceased in the course of the secondary disease. He has also known chronic dyspepsia, which appeared exclusive for years, cease under a cutaneous eruption.

“3. Disorders of the digestive organs, originating elsewhere, and exemplifying simple extension of disease, form a very numerous class. — 4. Disorder of the digestive organs, originating elsewhere, and holding a curative relation with respect to its primary seat. —

5. Disorder of the digestive organs, of synchronous origin with disorder elsewhere; at least disorder of these and other seats, where the succession cannot be defined. — 6. Disorder originating in the digestive organs, and producing disease elsewhere, which is neither of simple extension nor curative, but in which the secondary reacts, and increases the primary disorder. — 7. Disorder of the digestive organs, originating elsewhere, which is neither one of simple extension nor curative, but in which the primary disease is exacerbated by that of the digestive organs. — 8. Disorder of primary or secondary seats, including the digestive organs, with or without curative relation, extended to other seats, also with or without curative relation.” — P. 294.

We cannot follow our author in his illustrations of these classes; nor can we give a satisfactory account, within our limits, of his observations on the pathology and treatment of disorders of the digestive canal. We may, however, observe, that he considers the blue pill, in doses of one or two grains every night, sometimes of service, when continued for a considerable time.

“Mercury in all its forms,” he remarks, “is generally prejudicial in the dyspepsia, accompanied by excessive nervous irritability, without evidence of disordered biliary secretion: but even in such cases, an improved state of health, at a more or less distant interval, will generally succeed to its discontinuance, provided it has not been carried to an injurious excess.” “A combination of sulphate of zinc, in doses of a grain, twice or three times a day, with rhubarb and extract of gentian, is sometimes useful in dyspepsia. I have

known an obstinate spasmodic asthma, which appeared to be intimately connected with disorder of the stomach, cured by a perseverance in this medicine for some months." — P. 307.

"Purgative medicines are not, in general, successful in mere disorder of the stomach, accompanied only with nervous irritability, and perhaps headaches; but they are eminently successful if the disorder of the stomach is accompanied with disordered function of the liver, or chronic pain in the side and stomach." "As a treatment for affections of this kind, I have found a pill, containing a grain and a half of aloes, one grain of blue pill, and one of ipecacuanha, taken three times a day, a good combination." — P. 309.

Dr. Pring considers, when purgatives, employed for the cure of any form of chronic disease, whether in the digestive organs or in distant seats, increase the symptoms in the early periods of their use, as they frequently do, that such increase of symptoms is rather an argument for the continuance or even increase of the remedy than for its suspension or diminution, since it shows that the remedy has a relation with the disease. The following paragraph contains some of Dr. Pring's remarks respecting diseases of the skin, which entirely coincide with those we have offered on various occasions: —

"The connexion between dyspepsia and diseases of the skin has been before remarked. Those who have written on diseases of the skin, with a great appearance of learning and connoisseurship, have done little more than multiply unnecessary and trivial distinctions, and propose a jargon of barbarous terms, which none but persons of very corrupt taste will take the trouble to remember. I do not, in the works alluded to, remember to have met with any thing like a principle of the pathology and treatment of these diseases. In this place it is necessary only to remark, that, as we have seen, in our analysis of the relations of disorders of the digestive organs, diseases of the skin are variously connected with such disorder; so a long-continued treatment, by small doses of blue pill, perhaps with colocynth or aloes and ipecacuanha, will cure many of them, without recurring to the more powerful agency of calomel, corrosive sublimate, or arsenic: and as a local application, hartshorn and water, in the proportion of a dram of the former to an ounce of the latter, is almost a specific in many chronic diseases of the skin, attended either with lymphatic or pustular eruptions, whether confined to one spot or extending over a whole limb. The effect of this stimulus is to exchange a peculiar for a common inflammation; and I presume, by the same mode, liquor ammoniæ, liquor potassæ, and turpentine, will cure tinea capitis: the proportion of hartshorn is to be regulated by the irritability of the surface, and either applied constantly or occasionally, according to circumstances. This remedy has long been employed in erysipelas, and I have used it with great success in almost every case of disease of the skin described above, which

has fallen under this treatment: if continued after the specific character of the disease seems to be subdued, it appears to irritate and produce troublesome exfoliations of the cuticle."—Pp. 311—313.

"1. The most effectual of the external applications are sulphur, tar, the different forms of mercurial ointment, hartshorn, zinc, acetate of lead, spirit of turpentine employed with oil as a liniment, which I have found successful in some inveterate diseases of the scalp, &c. All these remedies tend obviously to produce what is called a new action. 2. The internal ones, which act chiefly on the skin, are sulphur, arsenic, ammonia; these produce heat of skin, temporary fever, and thus substitute an artificial for a natural diseased action. 3. The remedies which cure diseases of the skin by their action upon related seats, and may be regarded as means of revulsion, are purgatives, emetic tartar, calomel, corrosive sublimate, nitre, &c."—P. 313.

Chapter VI. Origin of disease in the nerves.—This is a doctrine which has been adopted since the days of Willis. The arguments which Dr. Pring has adduced with much cogency against the system, are applicable only to those views of disease which have for their fundamental propositions, that all those tissues, to which the name nervous has been applied, are sent off from, and form part of, those textures of which the brain and spinal cord are the origin and centre. They by no means affect the opinions which are brought forward* respecting those textures which have been usually called ganglionic nerves, and which are as different from the nervous texture of animal life as they are from the muscular or any other substance. Considering, therefore, that Dr. Pring's arguments justly apply, and are directed to those doctrines of disease which refer all derangements to the nervous system—the authors of which doctrines having in every case viewed the nervous system as identical in organization and function throughout—we concur in all his reasoning. With respect to the extent of the nervous functions, the following is the opinion of our author:—

"The evidence which we at present possess with respect to the function of the nerves amounts to no more than this:—1st, That an unimpaired connexion should subsist between those of a seat and their centre or origin, in order that such seat should be capable of sensation or voluntary motion. 2d, That nerves themselves have no relative function with the structures with which they are allied, independent of the influence which they convey from their centres. 3d, That although the processes of organic life are continued independently of the nerves, yet the privation of accustomed nervous influence, as a cause of excitement, which to some extent may be substituted by

other stimuli, is attended by a diminished energy of some or all of the functions of organic life. 4th, That although organic life, consisting of a maintenance of the living principle, assimilation, and absorption of organic particles, may be continued without nervous influence, yet this influence, in some instances, may be necessary to the functions of organs; which functions are powers superadded to the general characteristics of organic life. Thus the influence from a centre of nerves may be necessary to digestion, perhaps also to some glandular secretions, &c."— P. 325.

Now this we consider perfectly just with respect to the functions of voluntary nerves, or the nervous system strictly so called; but we conceive, from the most convincing considerations, that the operations of the ganglial or organic class of nerves are of as different a kind as their texture, distributions, &c. are different. We find these nerves chiefly supplying very distinct and dissimilar organs and textures from those which receive the voluntary nerves. We find that secretory organs and textures, and the whole vascular system, obtain their nerves exclusively from the ganglial class of nerves; and we have good reasons for concluding that assimilation and secretion, all the phenomena which the blood and vascular system display, the generation of animal heat, &c. — in short, that all the processes essentially vital, are the functions of this class of nerves; and, moreover, that all the derangements of these functions have their origin in this class, and in the relations which it holds with the other systems and textures of the body, either in the seat of disease, or more or less generally throughout the animal frame..

Dr. Pring draws the following conclusions respecting the share which the nervous system appears to him to have in disease. Restricting the term nervous system to the nerves of sensation and voluntary motion, in connexion with their centres, we are not disposed to dispute his inferences:—

" 1. That disease, originating either spontaneously or from external causes, may concern principally those properties of a structure which belong to and maintain its organic life.

" 2. That the function of the nerves of such part may participate in a disease which engages probably, more or less, all the properties of the textures.

" 3. That the disease may be increased or modified by the participation in it of the function of the nerves.

" 4. That the centres of the nerves, by nervous connexion, may become disordered by a disease originating independently of the function of the nerves; and that the disorder of a centre of nerves so produced may react upon the original disease, or extend the phenomena of the disease to other seats.

" 5. That disease may originate in the branches of nerves, and from a disordered state of properties may produce the phenomena

dependent upon an increase or diminution of their function, or influence the structures with which they are allied by proper arising out of their assumed condition; and that in either way, it may direct or modify the processes of disease, according to their relation with other properties which may also have digressed from a state of health.

"6. That disorder may originate in the brain and other centre nerves.

"7. That this origin of disorder may concern only the function of the organ, and be expressed in remote seats by a modification of the natural influence of such function, which will consist principally in a variety of degree.

"8. That phenomena of disease of the kind just described may also originate in the brain or other nervous centre, by secondary disease in the same seat; that is, a process of disease which commences in the organic life of a nervous centre may disturb the functions which belong to animal life; and this effect may be expressed elsewhere in the other systems, exclusively by phenomena dependent upon the animal functions, over which such nervous centre presides.

"9. That disorder of the brain or other nervous centre, originating in either of the two last modes, may extend disorder to distant seats either by exciting a predisposition in such seats, if the functions of the nervous centre are merely increased or diminished, or by producing disease in such seats, by sympathetic relations of preternatural properties, dependent upon the condition of disease which has been assumed by the centre of nerves." — Pp. 345, 346.

Chapter VII. is on the relations of disease. — We regret that our limits prevent us from exhibiting the opinions of this able pathologist respecting the interesting topics which this chapter embraces: we recommend them to the attentive perusal of our readers.

We gave as full an account of the other chapters of this important work as we could, consistently with our plan, at the time when we were recording the advancement of medical science. — We must now take leave of Dr. P.'s very excellent work for the present. Our opinion of its merits has been fully given. We may, however, now add, that the opinion which we formed after a first reading of the work has been fully confirmed by a second perusal of it. It is not a reading-made-easy book — one which will be valued, by the idle, the ignorant, or the empirical Practitioner; such a reader will find a difficulty in comprehending some parts of it, and his untutored mind will even be unable to follow Dr. Pring in many of his profound analyses, and in the intimate views which he takes of morbid phenomena. It is chiefly in this department, and indeed in other departments, of our Profession, that many who practise it ought to regret — were they capable of comprehending the real cause of a portion of their def-

ciencies — the want of that kind of education in early life — namely, well-conducted and full courses of mathematical, logical, and metaphysical studies — which is the best suited to form the mind to habits of calm reflection, and to direct it to objects of profound research. For this reason, therefore, the present work will be most valued by those in the Profession whose opinions are most valuable; and we are happy to find, that these are so numerous amongst us, since we understand that it has already been more read, and more generally approved of, than any other work on the abstract part of medicine has been in so very short a time as has yet elapsed since its publication.

II.

A Treatise on Practical Cupping, comprising an Historical Relation of the Operation, through Ancient and Modern Times; with a copious and minute Description of the several Methods of performing it; intended for the instruction of the Medical Student, and of Practitioners in general. By SAMUEL BAYFIELD. With Plates. 12mo. London, 1823. Pp. 175.

MR. BAYFIELD, in his introduction to this useful little work, offers some remarks on the importance of a knowledge of the operation of cupping, and of dexterity in performing it, to Surgeons and general Practitioners, especially to those who practise in the country, and to the medical officers of the navy and army. Mr. B. adduces several instances corroborative of the justness of these opinions, and afterwards gives an historical account of this manner of detracting blood, which betrays considerable information. He very judiciously confines himself to a description of the manual operation of cupping, and leaves the account of its therapeutical powers in various diseases to other writers.

The description of the instruments and of the manner of operating with them is full and perspicuous. Mr. Bayfield recommends the approved scarificator, and offers some judicious remarks respecting the cucurbitulæ, for which we refer to the volume. The following are excerpts from this part of the work. In addition to these and the torch, or exhausting lamp, the operator should have in readiness, “a washing-hand basin; a piece of fine sponge; a small bottle of rectified spirit of wine; a lighted taper; a jug of warm water; some folds of lint; a piece of adhesive plaster, or black court plaster; a box of cerate, either of wax, or

spermaceti; two or three napkins; a graduated measure." Instead of the last article, one of the glasses may be used.

Mr. Bayfield next describes the operation, and gives perspicuous directions, suitable to the varying circumstances in which cupping may be required.

" 2. For general purposes, let the scarificator be set so that the points of the lancets project from the face of the box to the distance of one quarter of an inch.

" There are particular exceptions to this rule; when the operation is to be performed behind the ears, the depth of the lancets should be one-seventh of an inch; for the temple one-eighth, and for the scalp one-sixth of an inch.

" 3. The next step is to select a spot (on the part chosen for the operation) where each glass is to be affixed. It should be free from the projection of any process of bone, and yet not be overloaded with fat.

" 4. The part therefore should be carefully examined with the fingers; and an eligible spot being found, the glass should be placed upon it, for the purpose of adjusting its exact situation, and to serve as a guide to the eye in its subsequent application.

" The number of glasses which should be used must be determined according as the part is adapted to receive them, and to the quantity of blood necessary to be drawn. About one glass to every four ounces required is the usual ratio; so that if it be wished to take away eighteen or twenty ounces, and the part will allow of their application, four or five glasses may be put on; as the abdomen, the back, &c.: but there are few parts where more than four can be applied conveniently, and often not more than two or three; as on the upper part of the neck, for instance; and sometimes but one, as on the temple, &c. Three cups usually extract from five to seven ounces of blood at each application.

" 5. Some hot water is now to be put into a basin, and the cups are to be immersed in it till they become warm. The part itself should be fomented with hot water; and the operator having poured two or three drams of the spirit into a cup or glass, takes the torch in his right hand, and a cupping-glass in the left, and places the lower edge of the glass in contact with the skin, (in the exact spot where it is to be affixed) elevating the edge at the opposite side of the glass about an inch and a half from the skin; the wick of the torch is now to be dipped into the spirit, lighted at the taper, and carried under the glass to its centre, where it is suffered to remain about two seconds; it is then to be withdrawn quickly, and if it has been properly performed, the operator will feel the glass sink from his fingers, and fix itself to the part; the skin rising slowly into the glass, until it occupies nearly one-third of the space within it.

" 6. The glass having remained affixed about a minute (during which time the top of the scarificator-box should be warmed on the palm of the hand), the operator holding the scarificator in his right hand, takes hold of the glass with his left, and insinuating one of the

finger-nails of his right hand beneath the glass, the air rushes into it. He instantly removes the glass, and before the tumefaction has subsided, springs the lancets through the integuments. The glass is then immediately exhausted, and applied as before, when the blood will be observed to flow copiously."

We must refer to the original for directions for the manner of removing the glasses, which ought to be with the assistance of a sponge.

We recommend this work as the best account of the operation of cupping, and as containing the best and most perspicuous description of the manner of performing it, that has come before us.

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

Recherches sur le Ramollissement du Cerveau: ouvrage dans lequel on s'efforce de distinguer les diverses Affections de ce Viscère par des Signes caractéristiques. Par LÉON ROSTAN, Médecin de l'Hospice de la Vieillesse — Femmes (*Salpêtrière*.) Professeur de Médecine Clinique. Seconde édition. Paris, 1823. 8vo. Pp. 503.

Researches on Softening of the Brain: a work in which the various Affections of that Viscus are attempted to be distinguished by characteristic Symptoms. By LÉON ROSTAN, Physician to the Hospital for Aged Females (*Salpêtrière*.) Professor of Clinical Medicine. Second edition. Paris, 1823. 8vo. Pp. 503.

ALTHOUGH many isolated examples of the disease to which the term "*Softening of the Brain*" has been applied by the French writers, have been given in the works of various authors, particularly in those of MORGAGNI, ROCHOUX, ABERCROMBIE, BRICHETEAU, MOULIN, &c. the author before us is entitled to the credit of having first treated *ex professo* of the subject. A detail of the pathological and therapeutical views of this gentleman will be the object of the present analysis.

Symptoms. — Softening of the brain is said to present two distinct periods.

First period.—The symptoms which show themselves in the first period are uncertain, fugitive, and common to many diseases, especially to those which have a somewhat intimate connexion with the encephalon. Taken by themselves, they are consequently of but little importance; but on the supervision of the signs which mark the second period, they become of so much value, that if they had not been present the existence of softening of the brain could not be affirmed. One or two of these phenomena are sufficient to indicate the disease. They are local or general, and belong to the encephalon or to the other viscera. The principal among them are a fixed, obstinate, intolerable pain of the head, continuing for several days or months: this pain is not constant. Vertigo—diminution of the intellectual faculties: the perception, judgment, memory, and imagination, are more or less weakened: slowness in answering—embarrassment in speech—occasionally abruptness of speech—sadness—hypochondriasis or indifference—tendency to sleep—formication—numbness in one of the limbs, commonly towards their extremities—difficulty in laying hold of objects—rigidity and contraction of the limbs: the sensibility of the diseased limbs is generally more diminished than their contractility: sometimes the sensibility increases so much that the least touch compels the patient to cry out: these pains may be distinguished from those of rheumatism, by their being always unattended with redness, heat, or tumefaction: the intellectual faculties are occasionally depraved, and sometimes improved: there is delirium, with extreme agitation and febrile symptoms: finally, mental alienation and dotage frequently precede softening of the brain.

Difficulty in supporting a strong light, as well as strabismus, is rarely present; frequently, however, diminution and perversion of the sight, or complete blindness, tinnitus aurium, difficulty in bearing the least noise, and more frequently a diminished state of hearing, occur.

The smell and taste seldom present any alteration sufficiently sensible to cause the patient to complain. The major part of the symptoms above described are so slight, that the patients rarely apply for medical assistance, and frequently do not even mention them to those around them. It will be seen, under the head of diagnosis, that these phenomena are not the precursory signs of apoplexy.

During this period the organic functions also frequently present derangements. The appetite is diminished—there is much thirst—the digestion is impaired—the mouth clammy, and the tongue white: nausea exists, and even vomiting of a bilious, green, and porraceous matter: the

epigastrium is tender on pressure, as well as the rest of the abdomen: in some cases diarrhoea manifests itself; but constipation, or rather torpor of the rectum, is more common: it rarely happens that during this period the stools are passed involuntarily: it is not the same, however, with respect to the urine, which, for the greatest part of the time, is retained with difficulty: the quantity of this evacuation is, however, less than ordinary. The respiration is sometimes affected; but it is more frequently rendered slower than quicker. The pulse is very variable, rarely increased in frequency: occasionally it is more full, whilst in other cases it is smaller and slower than natural. It is by no means uncommon for some severe thoracic or abdominal inflammation to precede the softening of the brain. M. ROSTAN has sometimes observed it preceded by a general inflammatory diathesis.

Second period.—After having laboured under some of the symptoms above described, the use of some of the members, or even of half of the body, is suddenly or gradually lost, and in a more or less rapid manner. During the greater part of the time the understanding remains perfect: sometimes, however, the patient has extreme difficulty in answering the questions which may be addressed to him; and it is only by signs that he shows his comprehension of them. In certain cases there exists a complete comatose state. If the coma and paralysis have suddenly supervened, the patient commonly regains his intellect on the day after the supervision of these symptoms; fresh symptoms, however, come on, and become aggravated; the senses are entirely lost; the patient falls into a state of perfect coma: at the expiration of some days, commonly from the fourth to the fifteenth, the limbs become immoveable, and he dies, presenting, in the greatest number of cases, the symptoms of typhus fever.

Diminution or abolition of the muscular contractility, or paralysis, most frequently takes place. There exist also numbness, great sense of weight, formication, pricking, lancinating, and intolerable pains in the limbs—especially increased when the limbs are touched. It is not uncommon to observe great rigidity, and an inseparable contraction of the diseased side. Convulsions rarely occur.

The face may be either pale or much flushed: the pain in the head, which existed prior to the appearance of the symptoms of the second period, becomes increased in severity: at this stage it supervenes, even when the patient has not previously experienced it. If he be asked to point out the part where he experiences the pain, after the first, but frequently not until after the second or third question, he places the unaffected hand on some part of the

head, which is almost always the seat of the disease, and on the side opposite to that affected with paralysis. When delirium exists, it continues after the manifestation of the paralysis; but the patient is more taciturn.

Delirium is not common: a more or less considerable diminution of the intellects — a comatose state, more or less profound, are more usual. The senses partake of this condition — they become much less sensible to their excitants, and cease to be at all affected by them towards the last moments of the disease. Sometimes one of the pupils is more dilated than the other, and is even wholly immovable. The eyes are frequently fixed, and directed upwards: the head commonly inclined backwards. The hearing generally becomes hard. M. Rostan does not think that he has seen either it or the sight become more acute in the second period. As for the taste and smell, they almost always show a diminution of their sensibility when any stimulants are applied to them. The mouth is rarely distorted at this period: later on, however, it becomes so: the sense of touch probably suffers the same derangement; but it is difficult to arrive at any positive knowledge on this subject: picking of the bed-clothes is frequently a concomitant.

The thirst is commonly augmented: the appetite dull: the lips and teeth are dry: the tongue rugous and cracked, at first red, but soon brownish, and even blackish. Deglutition is often difficult, and sometimes impracticable: the patient makes considerable efforts at swallowing, and sometimes experiences convulsions during the attempts. In some cases copious vomiting, at first of food, and afterwards of bile, is observed. The abdomen sometimes gives signs of high sensibility: occasionally there are involuntary alvine evacuations, but more frequently constipation is present. The urine most commonly passes unknown to the patient, as has been pointed out under the first period: the respiration is affected in the generality of cases: the pulse, in some cases, is more frequent and strong than usual.

Progress of the disease. — This state remains stationary for a longer or shorter time, after which the disease proceeds more or less rapidly to its fatal termination. At other times its progress is evident in the first days, and it always goes on increasing until its termination: it is very rare to see the symptoms of coma and paralysis diminish at a somewhat advanced period of this affection. The progress of the disease is essentially continual, and always increasing. The patient almost constantly lies on the back or the paralysed side during the whole course of the disease. This affection not only pursues an acute and chronic march, but also all the

intermediate shades. The acute state may be distinguished, and a more speedy termination be predicted, when the symptoms proceed with intensity and rapidity. If they are slow and stationary, the fatal period will be more remote.

This affection does not constantly proceed with such regularity, but presents various anomalies highly necessary to be known. These anomalies spread much uncertainty on the diagnosis of the disease, and may even render it perfectly impossible. There are cases of softening which present no symptom, others which proceed entirely contrary to the regular march, and others which present an insufficient number of symptoms to characterize the disease. There are cases, for example, in which the precursory symptoms are entirely wanting: such cases M. Rostan thinks, however, to be much more rare than they may appear to be to the major part of those who have seen but little of softening of the encephalon; but he is of opinion that cases may happen in which they do not exist.

Complication of the disease. — The affections which most frequently exist in concurrence with softening of the brain, are sanguineous apoplexy — the most common complication: inflammation of the membranes of the brain; cancers of the brain: fungous tumours, exostoses, tubercles, and hydatids. Phlegmasiæ of all the other viscera may also be co-existent with softening of the brain. In order to show the particular appearance impressed upon the disease of which we are now treating by the different affections above-mentioned, M. Rostan has adduced several examples in the course of his treatise.

Duration of the disease. — This is a subject on which it is difficult to arrive at any satisfactory knowledge, in consequence of our not being able to fix the date of the first symptoms: the precursory symptoms, or first period, according to M. Rostan, may vary in duration from some days only to months and even years. In the second stage a variable period may elapse between the moment at which paralysis supervenes and death. This period varies from two or three days to two or three months. The duration of the affection is also influenced by the more or less intense action of the exciting causes — the constitution and state of health of the individual; but especially by the extent, depth, and seat of the lesion, and by the more or less rational mode of treatment which may have been pursued.

Frequency of the disease. — M. Rostan considers that the disease is far from being infrequent; on the contrary, he thinks that it is the most common cerebral lesion, not excepting sanguineous apoplexy.

Pathological alterations.—The softening varies according to the degree of consistence of the cerebral substance—its colour, seat, extent, and number of alterations. The membranes are very frequently infiltrated by serum, presenting a gelatinous appearance: this does not, however, always exist, although there are but few cases in which it is not met with. In these very rare cases the membranes are dry, and without a manifest change of colour; occasionally they are red and injected, but seldom affected with suppuration: sometimes the membranes adhere to the softened part of the brain. The morbid consistence of the brain varies from that of the thinnest *bouillie* to a firmness approaching that which is natural to the organ. The middle state between these two extremes is the most frequent. When the softening is by no means considerable, it is difficult to appreciate it, unless there be at the same time change of colour, which frequently happens.

The colour of the softened portion may be yellowish, greenish, rose-coloured, red, chesnut, like lees of wine, or of a dull white. These shades may be met with in a larger or smaller number at the same time in the same individual. The greenish yellow is commonly found in cases where the softening has been subsequent to an old attack of apoplexy: at such times the centre of the softened part presents this colour. The rose-coloured shade, more or less red, is discovered in cases where the disease has been primary: it shows itself more particularly towards the circumference, and especially on the convolutions. The colour of lees of wine is not uncommon: it gives to the softened part the appearance of a scorbutic spot or an ecchymosis. M. Rostan considers that this last appearance is in all probability owing to a frustrated hemorrhagic effort (*un effort hémorrhagique avorté*): he has never seen an example where there was one spot only: in general they are numerous. The softened portion is often of a dull white colour like milk; the whiteness of the medullary substance seeming heightened by the contrast: this case is not uncommon. These are the colours which M. Rostan has most frequently observed; but it will be readily conceived that the intermediate or other shades may likewise exist.

The softening may be superficial or profound. If the lesion be superficial, the convolutions are found disfigured and tumefied, either in a circumscribed part, or in the whole of the hemisphere, rarely in both, but always in a more or less uneven manner. At other times the change in consistence is indicated by the change of colour in the cortical substance; this latter, in place of being of a yellowish grey, is

rose-coloured in some parts, and almost always only half through its substance. When these parts are touched, they are found manifestly softer than those which have preserved their primitive form and colour. If they be cut with a scalpel, the edges which form the segments are obtuse, rounded, and uneven: when the back or the handle of a scalpel, or any blunt body, is passed over the altered part, a portion of this substance is commonly removed by it, which does not occur when its consistence is natural. This superficial lesion may be of a greenish yellow colour, and may be met with at the same time as the other, and in parts which are more softened. It follows the convolutions, dipping with them into all their windings. It cannot extend beyond the cortical substance, or the superficies of the medullary matter. Its most common extent of surface is two or three inches in circumference: it may, however, occupy half or even the whole of a hemisphere.

The alteration is sometimes, however, seated more deeply: all the parts of this viscus are exposed to this disorganization: the corpora striata and thalami optici are most frequently affected with it: after them the central part of the hemispheres—the middle lobe is its most common seat. M. Rostan has not often observed it in the falx cerebri. The cerebellum and cerebral prolongations are not exempt from it. M. Scipio Pinel is said to have frequently witnessed this species of lesion in the spinal marrow. At these different depths the softening may be more or less extensive: it may be of the size of a haricot-bean, or it may occupy a great part of one lobe of the brain. It is difficult to fix the limits of the softening in a precise manner; the centre being always more softened than the circumference, and the latter resuming its natural consistence in an irregular, indeterminate, and gradual manner. There is commonly but one lesion: it is rare that both hemispheres are affected: at such times the one is always more affected than, and seems to have preceded, the other. The same hemisphere may be softened in different degrees in several parts: in short, it may contain a multitude of ecchymoses, of a violet or lees of wine colour, resembling scorbutic patches, which are scattered at different depths over the cerebral substance. The softening may be joined with effusion of blood; to which, in many cases, it forms an envelope, and sometimes, indeed by no means uncommonly, it exists in a distant part. It also accompanies cancer of the brain, and every organic derangement of that viscus.

The ventricles frequently contain a considerable quantity of serum, which, according to M. Rostan, has frequently

distracted the attention of observers, and led them to take this disease for hydrocephalus or serous apoplexy. The arteries of the brain are commonly ossified when this organ is softened.

Nature of the disease.—The following are M. Rostan's ideas on this subject :

“ I am of opinion that softening of the brain is often an inflammatory affection—that it is frequently the result of encephalitis. The rose colour, which is sometimes observed, can only be the effect of an inflammatory process: the fixed pain of the head announces a process of the same kind, although all pains are not inflammatory: the convolutions are often thickened and tumefied: the strength, the frequency of the pulse, the heat of the skin; the redness of the face, the dryness of the tongue, the thirst which is observed in certain cases, are signs of reaction, which commonly accompany the phlegmasie: the softening, manifesting itself occasionally around a sanguineous effusion, a cancer or tubercle, may be at such times assimilated to the inflammation which nature produces around organic lesions of all kinds at a certain epoch.

“ But if the softening sometimes presents these characters, it more commonly offers some entirely opposite: errors in reasoning should be avoided: because a thing frequently happens in one manner, it does not follow that it should always happen in the same way. Thus the symptoms of an opposite nature to those which we have just shown to point out inflammation, are frequently present, viz. diminution of contractility and sensibility, paralysis, stupor, dulness of intellect, paleness, cold, smallness of pulse, absence of headache. The colour of the brain in the majority of cases is unchanged: occasionally it is red, like the lees of wine—of a scorbutic appearance. There is neither blood nor pus effused into the cerebral substance. Softening of the brain may be the senile destruction of this organ: it may be a sort of scorbutic hemorrhage: in short, it may be of an unknown nature. It is, therefore, sometimes inflammatory and sometimes not.”

Termination and prognosis.—The resolution of softening of the brain, when arrived at its second period, appears to M. Rostan a problem yet to solve: he has adopted every mode of treatment without having obtained it. It is not so, however, with the first period, which is susceptible of cure. Some organic lesions met with after death, and not at all resembling the marks left by apoplexy, might lead to the belief that they had been produced by softening of the brain, and that consequently it had been cured; but this can only be conjecture. The brain is sometimes hardened in a particular manner: this lesion has been considered by many as the sign of an old softening of the brain. Cancer of the brain M. Rostan considers to be no more the constant sequel of inflammation than other cancers; and he thinks

that softening of the brain following cancer is a much more frequent occurrence. There are some individuals who consider that softening is only a gangrenous state of the encephalon.

Causes of the disease.—We are, at the present time, ignorant of the predisposing causes or predispositions of softening of the brain. Old age, however, appears to be a predisposition; and M. Rostan considers that women are more subject to it than men, if the registers kept at the hospitals be taken as a criterion.

The exciting causes are esteemed to be those of all diseases, but more especially such as act directly on the encephalon: the action of a scorching sun, or of intense cold: the application of ice upon the head, or of any substance endowed with active properties: a violent percussion: a fall upon the head: intense thought: long watching: violent passions, especially chagrin: the abuse of alimentary or medical substances, which act strongly on the encephalon, such as wine, spirituous liquors, coffee, narcotics, &c.

Softening of the spinal marrow.—The smallness of the diameter of the spinal marrow, and the narrowness of the vertebral canal, do not permit the thought that the disease can only occupy the half of that organ, and consequently do not allow us to think that the signs which announce that lesion can be for a long time confined to one half of the body. Thus the symptoms occasioned by the alteration of this organ soon strike both sides of the body, when it has nevertheless (which is rare) commenced with one: according to the nature of the derangement there will be augmentation, perversion, diminution, or even abolition, of sensation and of motion in the parts situated beneath the alteration. If the disease be inflammatory, there will be convulsions of the limbs and trunk, with symptoms of reaction. If the softening be atonic, there will be diminution, and afterwards complete loss of sensibility and mobility. If the softening occupy the dorsal and lumbar region, the trunk, the rectum, the bladder, the genital organs, and the lower extremities, will be the seat of the lesion: if it occupy the cervical region, especially the most elevated part, paralysis, convulsions, &c. of the thoracic members, will be joined to the symptoms just described. The functions of the senses and of the understanding are more or less disturbed in this disease, as well as the respiratory, circulatory, and digestive functions, which are under the more or less immediate influence of the spinal marrow.

(To be concluded in our next Number.)

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

I. *Experiments on the Therapeutical Properties of Strychnine.*

By M. ANDRAL, *fil.**

THE strychnine which M. Andral exhibited in the following cases was as pure as could be obtained, and was entirely deprived of brucine (see the subsequent experiments with this substance), to which it remained united in the preparations which M. Pelletier first made of it. It was given in the form of pills, some containing the twelfth part of a grain, others the sixth of a grain.

Case 1st.—A house-painter, after having been several times affected with colic, was attacked with that variety of paralysis to which this class of mechanics are subject, and which consists in a great weakness of the extensor muscles of the hand. The paralysis had been ineffectually treated by stimulating frictions on the fore-arm. This individual took on the first day a pill, night and morning, each containing half a grain of this alkali. He experienced a painful trembling in the extensor muscles. On the three following days the same dose was attended with like effects. Four pills of the same strength were given on the fifth, sixth, and seventh days, two night and morning. The effects were slight shaking of the limbs, spasmodic contraction of the extensors of the fingers, and a diminution of the paralysis. Pills of one-sixth of a grain each were then given, commencing with one, and afterwards increasing them to four at the end of eight days. During this time he experienced violent shocks. He soon left the hospital (La Charité), retaining only a slight weakness in his hands.

Case 2d.—A compounder of colours was affected with a similar form and degree of disease to the preceding. A single pill, containing one-twelfth of a grain, occasioned slight trismus, and incipient tetanic stiffness in the muscles of the neck, the abdomen, and the limbs. The next day he took another pill, and experienced only some spasmodic contractions in the limbs. At the end of six pills, a pill was prescribed for him, night and morning: violent contractions of both arms took place. The strychnine was continued at this dose for fifteen days; at the end of this time the paralysis had disappeared.

Case 3d.—A German, of a strong constitution, who had long laboured under paralysis of the extensors of both hands, from the effects of the preparations of lead, took a pill of one-twelfth of a grain, without feeling any effects from it. At the dose of one-third of a grain, he began to experience some shocks. He took somewhat too speedily a little more than a grain of this alkali: at this dose he experienced such forcible contractions, that it was necessary to reduce it to a grain. This man was not benefited by it. This case, compared with the preceding, shows how

* The following experiments were made at La Charité, in the wards of M. Lermnier.

much the action of strychnine may vary according to the susceptibility of the subject.

Case 4th.—A man accustomed to work in white lead had the same sort of paralysis as the preceding. A pill containing one-twelfth of a grain of strychnine produced in him violent trismus; the next day he took a like quantity, and this time felt no effect. Two pills produced strong shocks in the limbs. In a short time the dose was increased to two-thirds of a grain: this quantity could not be exceeded, owing to the supervention of tetanic symptoms. This patient was relieved.

Case 5th.—In a potter, paralysed as the former, the dose of strychnine was raised, in twelve days, to one grain. He experienced weak contractions only. When this dose was exceeded, locking of the jaws, and throwing of the head backwards, supervened. Terrified by these unpleasant symptoms, the patient would take no more pills, and left the hospital without being relieved.

Case 6th.—A man was admitted into the hospital with incomplete paralysis, which had been ineffectually treated by blisters, moxas, and cauteries, applied on the lumbar region: there was no deviation of the spine. A pill, consisting of one-twelfth of a grain, did not produce any effect; two pills occasioned slight convulsions of the inferior limbs: they were carried to the extent of four a day (a third of a grain). This dose gave rise to somewhat acute pain in the lumbar region, and at the same time to stiffness in the inferior limbs only, and to notable augmentation of the paraplegia. The strychnine was discontinued.

M. Andral considers the paraplegia in this individual as probably the result of a lesion of the spinal chord, which the strychnine seemed to aggravate.

Case 7th.—An old man, who had been long affected with complete paraplegia, took three pills of one-twelfth of a grain each, without feeling any effect. Four pills (a third of a grain) caused slight contractions in all the limbs. It was then laid aside.

Case 8th.—A man had remained hemiplegic after an old attack of apoplexy. In him a pill, consisting of one-twelfth of a grain, was sufficient to occasion a strong tetanic stiffness of the paralysed limbs. On the subsequent days this man experienced, although the strychnine was discontinued, violent pains in the head on the side opposite to the hemiplegia. His intellects became confused, and the hemiplegia was increased; in short, he presented several symptoms which characterize softening of the brain. M. Andral asks, "Did the strychnine in this case produce an attack of inflammation around the old apoplectic cyst or cavity?"—*Journal de Physiologie*, Juillet, 1823.

II. The manner of obtaining Brucine adopted by the French Chemists.

Brucine is an organic salifiable base, lately discovered by MM. Pelletier and Caventou, in the bark commonly known by the name of the spurious *Angustura*; (*Brucea Antidysenterica*, according to some: others consider it the *Strychnos Colubrinum*.) Brucine is white, regularly crystallized in oblique prisms, with a parallelogrammatic base. Its savour is very bitter, slightly acrid, and styptic. It is soluble in five hundred parts of boiling, and in eight hundred parts of cold water: it is very soluble in alcohol. It forms with acids salts possessing different characters from those presented by strychnine. Brucine is obtained by preparing an alcoholic extract of the spurious *Angustura* bark; and by dissolving this extract in a quantity of very cold water, and filtering it, in order to separate the fatty matter. The colouring matter is precipitated by the acetate of lead—the excess of lead, by sulphuretted hydrogen—and, lastly, the brucine, by an alkaline base. For this purpose magnesia is advantageously employed. The magnesia precipitate, slightly washed and dried, is treated by alcohol,

which dissolves the brucine, which is afterwards obtained by evaporation. As the brucine is but little soluble, the magnesia should not be too much washed. M. Pelletier considers that ten grains of brucine is equal, in its action on the animal economy, to one grain of strychnine; and M. Andral considers that six grains of the former are required to produce the effects of one grain of the latter, if impure, and of a quarter of a grain, if pure.—*Dictionnaire de Médecine*, vols. 2d and 3d; Articles *Angusture*, *Brucine*: and *Journ. de Physiologie*, Juillet, 1823.

III. Experiments on the Medicinal Properties of Brucine.

By M. ANDRAL, *fil.**

The pills of brucine which M. Andral administered to the subjects of the following cases contained each half a grain of this alkali. From experiments which he had made on animals, he was satisfied that no unpleasant effects could result from this dose.

Case 1st.—A mixer of colours laboured for two months under a paralysis of the hands. He took one pill without feeling any effect from it: two pills produced slight shocks in the arms; four pills caused tolerably strong contractions. He was discharged, cured.

Case 2d.—A compounder of colours, affected with a similar paralysis, took as many as four grains (gr. 3.281 Troy) of brucine without any sensible effect. At the dose of four grains and a half he felt a sort of unpleasant creeping sensation in the arms; and in the dose of five grains (gr. 4.1. Troy) he experienced somewhat strong shocks, without any serious symptom. The paralysis was remarkably diminished.

Case 3d.—A house-painter, paralysed in both hands, did not begin to experience any shocks until the dose of two grains of the brucine. Three grains caused somewhat strong trismus. The patient was only relieved.

Case 4th.—A worker in lead, and paralysed like the preceding, experienced a tetanic stiffness of all his limbs, after having taken three grains and a half of brucine. He was not relieved.

Case 5th.—A paraplegic subject, after having taken only two grains of brucine, felt a violent pain in the soles of his feet; his lower limbs were the seat of violent contractions. His condition was not improved.

Conclusions drawn from the preceding Experiments with the Strychnine and Brucine.—M. Andral deduces the following corollaries from the comparative trials which he has made with these substances:—

1st. Pure *strychnine* acts upon man like the extract of *nux vomica*, but with much greater intensity.

2dly. The action of *strychnine* is so energetic, that it ought to be used with the greatest precaution. Its effects, moreover, vary in a remarkable manner, according to the susceptibility of the individual.

3dly. The *brucine* acts upon man as upon animals, although much less energetically than strychnine. It may be advantageously substituted, as a medicine, for the alkali of the *nux vomica*.

4thly. Considered as regards their therapeutical properties, strychnine and brucine are more or less efficacious, according to the kind of paralysis which we may endeavour to combat with them. When employed in those cases wherein paralysis is connected with an inflammatory state of the brain or marrow, they may, very probably, augment the symptoms. In those subjects who are hemiplegic after cerebral hemorrhage, these alkalies are most commonly useless; and it is even to be feared that they may occasion inflammation of the cerebral substance around the apoplectic *foyer*. But there are cases in which, as if by a sort of habit, the paralysis would seem still to remain after the absorption of the extravasation: such cases may

* These experiments were likewise made at La Charité, in M. Lermier's wards.

yield to the strychnine or brucine. Lastly, these alkalies seem to be especially efficacious against paralysis, the cause of which cannot be referred to a lesion of the nervous centres; such as, more particularly, the species of paralysis to which individuals are subject who handle the preparations of lead. The preceding cases attest the efficacy of strychnine and brucine in this species of palsy. Of nine cases, six have been cured, or at least relieved. I could also adduce other cases of paralysis of the same kind, which have yielded to the alcoholic extract of *nux vomica*.—*Journal de Physiologie*, Juillet, 1823.

IV. Remarks on Poisoning by the White Oxide of Arsenic (*Arsenious Acid*). By PROFESSOR ORFILA.

M. Orfila commences this article with noticing, that Mr. Brodie, in an article on the effects of the white oxide of arsenic, in the *Philosophical Transactions* for the year 1812, had overlooked the effects of this substance in producing an alteration in the appearance and tissue of the heart. From experiments, M. O. states, since made by M. Smith and himself, they have been induced to conclude, that this substance, introduced into the stomach of dogs, injected into the veins, or applied to their cellular texture, acts especially upon the heart, the contractility of which it destroys, and frequently inflames its tissue; in fact, they observed the heart of a deeper red than usually with vermillion, or black and broad maculæ in the left ventricle, some of which extended a line into the fleshy structure of the heart; some also occupied the base of the largest of the columnæ carneæ, and the mitral and tricuspid valves.

Physiologists accustomed to compare the effects produced by poisons on dogs and man, have no hesitation in believing, that the white oxide of arsenic should occasion similar effects on one and the other. The following observation is well calculated to confirm this conclusion. The particulars of this case were collected by Dr. Jacquemin, *élève interne* at the Hotel Dieu.—“The body was opened in the presence of the Procureur du Roi, MM. Dupuytren, Petit, and myself: we then remarked alterations of the heart similar to those which are observed in dogs which have been poisoned by the same substance. We regret not being able to give also the details of another case of poisoning by the oxide of arsenic, observed at Brest by M. Mollet, who has informed us, that he likewise observed similar lesions in the tissue of the heart.”

Macé and Goval, public writers, living together on the fruits of their labour, found in their apartments three sausages and a piece of bread, wrapped up in paper. On Sunday evening, the 29th July, having nothing for supper, they ate the piece of bread and a sausage each, and commenced with the third. Two or three hours afterwards they began to feel severe colicky pains, with inclination to vomit. During the whole night the pains increased, and vomiting took place. An apothecary, whom they consulted, advised them to drink a quantity of milk; this they did, but the pain and vomiting did not cease. At ten o'clock, on Monday, they came to the public consultation at Hotel Dieu.

Goval appeared to suffer but little; his countenance and voice were not altered: he said that he had vomited much, and had had copious evacuations.

Macé walked with difficulty — the body was curved — the countenance pale, and expressive of the most profound pain. He was received into the hospital: he had several evacuations during the day, and frequent vomitings of yellowish liquid matters, which were collected. The epigastrium was very painful on pressure; the face was contracted. The patient was in a state of agitation and continual contraction. He could only answer the questions put to him in monosyllables. He was made to drink copiously of decoction of linseed and marshmallows. The same state of suffering was

present in the evening. The pulse was accelerated. He was ordered an anodyne draught and several injections, with eight or ten drops of laudanum in each. On Tuesday the vomiting had ceased; the stools contained a bloody mucus; delirium supervened; the extremities became cold. He died at ten o'clock in the evening, forty-eight hours after having taken the suspected sausages.

Goval did not enter into the Hotel Dieu until the evening of Monday; he complained of colic, but he had no vomiting or alvine evacuations after his admission. Could he, as he said, have rejected all the poison in the copious vomitings which he experienced before his admission into the hospital? The thing is possible; but from the evidence adduced before the judicial authorities, it is doubtful whether he really had been poisoned.

Dissection, thirty hours after death.—The body was in a state of general stiffness; the fingers and toes were strongly retracted. *Head.*—At the convex surface of the brain a slight reddish layer of matter was remarked. A little blood was effused into the right temporo-occipital fossa. These lesions were regarded as the effect of a fall which he had experienced a few hours before death. *Abdomen.*—Nothing particular was noticed in the stomach externally; in the interior, about eight ounces of a yellowish liquid. On sponging off this liquid, a great number of small white hard grains, of different sizes and shapes, were discoverable. The internal surface of this viscus was of a deep red colour, which was not removed either by washing, friction with a cloth, or by the blade of a scalpel. Towards the duodenal orifice, there existed several maculæ of an irregularly rounded form, and of a size varying from that of a shilling to that of a crown-piece, and of a brown colour. It is difficult to say whether these maculæ were a species of eccyhomiosis, or whether or not they were true eschars. In the situation of these patches the membranes appeared swollen; but they were not more easily lacerated than other parts of the stomach. The serous coat was not altered. The œsophagus was healthy. The duodenum and the commencement of the small intestine were of a deep red colour; but no maculæ were observed in them, as in the stomach. In the remainder of the digestive canal there existed a strong vascular injection. In the whole extent of the intestinal canal small white bodies were observable, similar to those which were in the stomach.

Chest.—The lungs presented nothing remarkable. The pericardium contained about an ounce of colourless serum. *The heart.*—Nothing particular externally. A remarkable alteration was remarkable internally. The left cavities were of a red marbled appearance. In the ventricle of this side, and principally on the columnæ carneæ, small maculæ, of a crimson red colour, were remarked. On cutting into the parts where these existed, they appeared not confined to the surface, but *penetrated into the fleshy substance of the heart.* The right cavities presented a red colour, much more red, and almost black. On the columnæ carneæ of the ventricle, some maculæ were also visible; but they were less numerous and less marked than in the left ventricle. The aorta, the pulmonary artery, and veins, presented no appearance of change.

The sausage which had been left at the supper was examined: the flesh was of a grey colour, and stuffed with a multitude of small white hard shining bodies—some in a state of powder, others of the size of millet and hemp-seed. A quantity of these white bodies, found in the sausage, was collected from the vomited matters, and from the liquids contained in the digestive canal: these were fully proved, by chemical reagents and by the garlic smell, &c. to have been coarsely pulverized fragments of arsenious acid.

Lesions of the heart, similar to those described in the present case, are only manifested when the subjects, whether men or dogs, have not died

until several hours after the administration of the poison ; and even in this case it may happen, for reasons with which we are unacquainted, to be impossible to discover them. It is known, indeed, that corrosive poisons sometimes produce death, without inflaming the tissues to which they have been applied ; with still greater reason, therefore, may they not be expected to alter those organs which are situated at a distance from the parts with which they are placed in contact? — *Archives Gén. de Méd.* Vol. I. p. 147.

V. *Case of Fistulous Opening in the left side of the Thorax, communicating with the Bronchiæ.* By J. LEBIDOIS, D. M.

A female, aged forty-three years, mother of several children, was received into the Hotel Dieu at Caën, for a progressive deterioration of health, from neglected catarrhs, irregular menstruation, &c. During her first residence in the hospital, a period of nine months, there formed in the left side of the thorax, in the region of the tenth rib, immediately before the external edge of the lumbo-humeralis muscle, a tumour, as large as a small pullet's egg, soft, somewhat painful, and without discoloration of the skin. The tumour was punctured, and a discharge of bloody pus took place from it, and afterwards a few splinters of dead bone. She continued subject to violent catarrh during the whole winter, which was ameliorated in the summer, and recurred with greater intensity the succeeding winter. She again returned to the hospital. On the cicatrix on the left side of the thorax there was then a small painful pimple, which broke in a few days, and discharged a small quantity of pus, and a few splinters of bone. The affections of the chest were now aggravated : to the cough, expectoration, and emaciation, were added alteration of the voice and hectic fever. The opening in the thorax furnished a reddish, and sometimes a puriform discharge.

During a violent fit of coughing, air was distinctly heard to pass out of the thorax, to the great surprise of the patient and attendants. The cough became milder—the noise ceased ; but the ear applied to the diseased part could easily distinguish a murmur at each expiration. The flame of a candle applied to the opening was frequently extinguished. These symptoms ceased at the end of six days, and frequently recurred at different intervals. She went out of the hospital.

This woman was admitted into the Hotel Dieu, for the third time, on the 28th of November, 1822. She had then hectic fever, oppression, pain between the shoulders, frequent cough, with clotted, greenish yellow sputa. The left side was depressed beneath the mammæ and the cicatrix, not allowing the escape of air. She was put upon the use of demulcent drinks, tinctures, weak soups, and mild pottage ; she was allowed chocolate, and wine and water.

Several days after her admission, the *religieuse* placed near her was astonished to hear distinctly the air pass from her side. The pulmonary fistula had reopened, and at the following visit the noise was distinctly audible to the medical attendants. It was very sensible during expiration ; and in the fits of coughing, or during efforts to blow the nose, the noise resembled the sound produced by blowing into a hollow key, so as not to make it whistle. She died twenty days after her last admission into the hospital.

Dissection.—This took place next day. The external cicatrix on the left side was deep and red. Its centre was pierced by a small aperture, through which the blunt end of a probe could reach the denuded surface of the tenth rib. The superior edge of this rib was denuded by caries. *Thoracic cavity.*—All the external surface of the left lung adhered to the parietes of the thorax. The ribs, detached and removed with precaution, showed a canal, one line in diameter, which passed from the carious notch :

in the tenth rib, horizontally (the body being in an erect posture), from the dorsal towards the sternal surface of the body, and, after a passage of three inches in length, became considerably narrower, bent to a right angle, and proceeding directly upwards, and a little backwards, penetrated into the substance of the lung at the base of this viscus. When arrived towards the centre of the lung, it terminated immediately into a bronchial division, as large as a goose-quill. The internal surface of this canal was smooth, and perfectly continuous with that of the bronchial division, but much narrower. A puriform mucus covered it, and a reddish membrane, very difficult to be separated, seemed to line it: its external surface in the lung was adherent, and confounded with the parenchyma. Its external extremity passed in the midst of the adhesions of the lung to the thorax, already mentioned.

The pleura, all around the canal, for the extent of several inches, was opaque, whitish, coriaceous, and at least two lines thicker. The adhesions were thick and reddish. The top of the lung was occupied with a large irregular cavity, half filled with purulent matter, of a greenish yellow colour: the base of this lung was simply engorged: every where else the parenchyma was dense, of a greenish colour, and covered with softened tubercles. Sanguineous engorgement and hepatization were remarked in the right lung. The heart presented a small whitish patch at its apex, and was somewhat voluminous. *Abdomen.*—The peritoneum was natural. The liver was very large, and irregular in its surface: its parenchyma was yellowish. The other abdominal viscera presented nothing remarkable.

VI. *On the Scorbutus which manifests itself in a local manner during the treatment of Fractures, and prevents their union.*—By M. JUS CLOQUET.

Occasionally during the treatment of fractures, all the symptoms which characterize the last stage of scurvy develop themselves in the fractured limb, and arrest for a long time, or even entirely prevent, the effusion of the fracture. This troublesome complication is sometimes an entirely local affection: at other times it first manifests itself in the fractured limb, and afterwards extends to the other organs of the body. This species of local traumatic scorbutus would appear to be produced by debilitating causes, acting directly on the fractured limb, or even in a general manner on the system. M. Cloquet, in order to prevent this affection, considers it necessary, in fractures complicated with inflammation, to be very cautious regarding general blood-letting; nor does he advise emollient applications to be continued longer than is absolutely necessary for allaying the inflammation; and after this period he recommends the patient to be dressed with linen, very dry and moderately tight. When the symptoms of local scorbutus have manifested themselves, the attention must be redoubled, tonics and stimulants must be given, and all the means proper in scurvy should be employed. It is also necessary, at each dressing, to leave the limb for some time exposed to the air, and especially to the rays of the sun.—*Archiv. Gén. de Méd. Avril, 1823.*

VII. *Fatal Effects of Fear.*

A man of colour, of middle age, rather above the common stature, robust, and apparently in good health, was received into the London Hospital, labouring under a moderate-sized aneurism of the femoral artery: an operation was proposed to him, to which he readily assented: on entering the theatre, however, he fainted: some wine and water was given to him, which he distinctly swallowed, and the operation was proceeded in, the artery exposed, and the ligature applied, but not tightened. During the operation it was observed that no pulsation could be felt in the tumour, but this was accounted for by the fainting: before tightening the ligature,

it was suggested by the operator to wait until the pulsation was re-established: some increased attention was then paid to arouse the dormant energies of the patient, and it was remarked that the syncope had continued an usual time: after the attempts had been some time persevered in, a more attentive observation proved that he was quite dead. All the usual resuscitative means were tried, but without effect. On *dissection*, both sides of the heart were found empty, and the lungs turgid with blood: no other particular appearance was observable.

VIII. *Of the Chemical Composition of the Strychnos Pseudo-kina.*

By M. VAUQUELIN.

On his return from Brazil, M. Saint-Hilaire sent M. Vauquelin the bark of a plant, which that enlightened traveller has named *strychnos pseudo-kina*, with the intention of determining whether it contained any of the principles of *cinchona*, whose properties it appears to possess, or of *strychnos*, with which it is allied by its botanical characters. The following is the result of M. Vauquelin's analysis:—

1. A bitter matter, which constitutes the chief part of its soluble constituents, and which possesses the febrifuge properties of the plant.
2. A resinous substance of a particular nature, very soluble in alcohol of 36°, and but little soluble in pure alcohol.
3. A coloured gunmy substance, united to an animalized principle, which modifies its physical properties.
4. A peculiar acid, which, like the infusion of gall-nuts, precipitates the sulphate of iron and gelatin, but with such modifications as to prevent its being confounded with gallic acid.

This analysis is remarkable, as it shows the absence of strychnine and of quinine from the bark of a plant which belongs to the genus *strychnos*, and possesses the properties of *cinchona*.

IX. *Number of the Births, Marriages, and Deaths, in Paris during the Year 1822.*

The following extract from the official returns to the Minister of the Interior, conveys a view of the births and deaths in Paris during the year 1822.

BIRTHS.			
	Males.	Females.	Total.
Legitimate children	8,671 ..	8,458 ..	17,129
Illegitimate children {	Owued	1,144 ..	2,270
	Not owned ..	3,716 ..	7,481
		13,562 ..	13,318 ..
		26,880	

MARRIAGES.	
Bachelors and spinsters	5,933
Bachelors and widows	329
Widowers and spinsters	685
Widowers and widows	210

7,157

DEATHS.			
MEN.	{ Bachelors	7,978	11,850
	{ Married	2,755	
	{ Widowers	914	
	{ Suicides	203	
WOMEN.	{ Unmarried	6,537	11,419
	{ Married	2,597	
	{ Widows	2,244	
	{ Suicides	41	
			23,269

X. Case of successful Operation for Salivary Fistula.

By Professor BÉCLARD.

At a late meeting of the *Académie Royale de Médecine*, M. Béclard mentioned a case of salivary fistula cured by forming an internal fistula which latter was made by passing into the internal part of the substance of the cheek a leaden style, so as to reach the excretory duct at the part where it was interrupted. The external fistula was united by the twisted suture, after having been rendered raw by excision. In this case, as well as in the former, which M. Béclard communicated to the *Académie* two years before, the cure took place without any other deformity than a small vertical and linear cicatrix. — *Arch. Gén. de Méd.* Juin, 1823.

XI. Improved Truss.

An ingeniously contrived truss has been submitted to our inspection, which appears well calculated to answer every expectation of such an apparatus. The chief difference between this and the common truss consists in two spiral springs being introduced between the truss and the pad, which, whilst it thereby admits of a self-adjusting movement, furnishes a sufficient degree of yielding pressure. We are acquainted with several cases in which these trusses are now made use of, and the principle appears to us sufficiently novel and ingenious to induce us to draw the attention of Surgeons to its merits. The following certificate of its practical utility justifies us in our desire, that ingenious and useful inventions connected with our Profession should, at least, obtain the reward which publicity is calculated to obtain for them.

"I hereby certify, that Mr. Coles, of London Bridge, has perfectly succeeded in keeping up a very difficult and complicated rupture, on which I operated some years since; in which case many of the best truss-makers in London had failed to effect any relief. When I placed this patient under his care, I promised, should he succeed, to give him a certificate of my approbation; and in conformity with that, I now state my firm conviction, that his truss will be found more efficacious than any at present employed in similar cases. I have since tried his trusses in other cases, and have been much pleased with the ingenuity he has displayed in adopting his means to the circumstances of each case.

George Street, Hanover Square,
July 23, 1823.

HENRY EARLE.

MONTHLY MEDICAL BIBLIOGRAPHY.

FOREIGN.

I. Recherches Historiques, Chimiques, et Médicales, sur l'Air Météoreux. Ouvrage couronné par l'Académie Royale des Sciences de Lyon. Par J. S. E. Julia, Professeur de Chimie Médicale, &c. Paris, 1823. 8vo. Pp. 155.

The researches of M. Julia, unfortunately, leave our knowledge of marsh miasma in as much obscurity as before they were undertaken. The conclusions to which he has arrived, from several experiments performed by himself, and from the observations of various authors, are —

"1st, That the nature of the noxious gas is unknown to us, and that there is every reason to think its deleterious effects are owing to a portion of animal or vegetable substance, in a state of putrefaction, combined with it; or rather to a solution of these substances in the air, and perhaps in the gases, which are the product of putrefaction, and which are supposed to exist in atmospheric air.

"2dly, That no experiment has been able to demonstrate, in marsh

miasma, any of the gases which are engendered by putrefaction; and that all my eudiometrical essays, and those of MM. Bérard, Cavendish, &c. have given the same constituent principles in this air, and the same quantities of these principles, as in common air.

"3dly, That if the gases which have been supposed to be contained in the air of marshes are really contained in it, it is in so small a quantity, that they escape all the researches and all the analyses of the most learned chemists.

"4thly, That those authors who have attributed the diseases produced by marshes to the predominance of azote, carbonated hydrogen, ammoniacal gas, &c. are strangely deceived, since these gases have never been met with in the air; and, moreover, as, both alone and united with atmospheric air, they have been respired by several learned observers without their having experienced any unpleasant effects.

"5thly, That had we even a conviction of their presence in the air, it would be in so small a quantity, that they could not exercise any action on the animal economy; as, when in a state of purity, they produce only momentary accidents, if not breathed long enough to cause death."

II. Formulaire de Montpellier, ou Recueil des Principales Formules Magistrales et Officinales, tirées des différens Ouvrages et de la Pratique des Médecins, Chirurgiens, et Pharmaciens, de Montpellier: contenant le Mode d'Administration de plusieurs nouveaux Médicamens, et précédé d'un Tableau de Matière Médicale. Par P. Bories, Ex-Pharmacien-Major des Armées, &c. &c. Montpellier, 1822. Pp. 356.

The most rational formulæ contained in this work are those of M. Magendie, although M. Bories, by not quoting them from the *Formulaire* of that excellent physiologist, would seem to be desirous that they should belong to the school of Montpellier. Several of the formulæ are excessively absurd: thus, M. Bories gives one for a cephalic powder "proper for causing the waters which produce hydrocephalus to run off by the nose;" and several others, equally ridiculous, might be referred to.

LITERARY INTELLIGENCE.

Just published, on the Use of the Moxa as a Therapeutical Agent, by Baron D. J. Larrey. Translated from the French, with Notes, and an Introduction containing a copious History of the Substance. By Robley Dunglison, Member of the Royal College of Surgeons, and one of the Editors of the Medical Repository. London. T. & G. Underwood. 8vo. Pp. lxxvi. and 148.

Dr. Shearman has in the press, Observations on Debility; exhibiting a concise View of the History and Treatment of that Affection, when occurring under a chronic form.

Nearly ready for publication, the Principles of Forensic Medicine, &c. by J. G. Smith, M.D. in 1 vol. 8vo. This edition will contain much new matter and various improvements.

The First Number of a Zoological Journal, to be continued quarterly, and edited by Thomas Bell, Esq. F.L.S., John George Children, Esq. F.R. & L.S., James de Carle Sowerby, Esq. F.L.S., and G. B. Sowerby, F.L.S., will appear on the 1st of January next.

Mr. Samuel Plumbe has in the press, a Systematic Treatise on the Diseases of the Skin, with coloured Plates.

In the press, the Sixth Edition, in 8vo. of Dr. Denman's Midwifery, by Dr. Blundell, &c.

THE METEOROLOGICAL JOURNAL,

From the 19th of AUGUST, to the 20th of SEPTEMBER, 1823,

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50, High Holborn.

Aug.	Moon.	Rain Gauge.	Therm.			Barom.		De Luc's Hygrom.		Winds.		Atmo. Variation.		
			9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	10 P. M.
20		,03	60	67	49	29	65	29	65	80	78 SW	S	Fine	Fine
21	●		59	65	50	29	64	29	72	77	75 SW	SSW		Rain
22		,32	58	65	50	29	62	29	50	85	87 SSE	SSW	Rain	Rain
23			62	68	49	29	50	29	60	85	86 SSW	SW		
24			61	69	50	29	67	29	67	87	93 SSE	S	Clo.	Rain
25			66	77	57	29	63	29	67	89	85 SSE	WSW	Fog.	Fine
26			64	70	53	29	80	29	80	89	88 N	NE	Sbo.	Rain
27		,33	62	70	52	29	90	29	83	79	75 NE	SSW	Clo.	Fine
28			61	73	55	30	00	29	88	75	77 SSW	SW	Fine	
29	☾		63	75	58	29	75	29	77	80	77 SW	SSW	Fine	
30			60	70	50	29	80	29	80	75	78 SSW	WSW	Clo.	Fine
31		,12	61	73	59	29	93	30	02	76	74 SSW	WSW	Fine	Fine
1			62	72	54	30	02	29	96	70	72 SW	WSW	Fine	Fine
2			64	71	56	29	87	29	80	68	70 SW	SW	Fine	Fine
3			59	70	58	29	87	29	93	74	70 SW	W	Fine	Fine
4	☾		62	74	54	29	96	30	00	65	74 SW	SW		
5			61	70	53	29	93	29	93	75	74 WSW	W		
6			60	66	48	29	97	29	90	65	67 WNW	N		
7			56	69	46	29	97	30	00	65	66 NNE	NNE		
8			54	65	45	30	04	30	02	58	60 NNE	NE		
9			49	65	43	30	00	29	98	55	60 NNE	NNE		
10			48	66	49	30	00	30	00	60	63 NNE	NE	Fog.	Fine
11			56	65	50	30	06	30	04	70	68 E	E	Fine	
12	☾		59	65	52	29	87	29	76	72	70 E	SSE		
13			60	67	55	29	68	29	68	71	75 S	SSW	Clo.	
14			61	70	58	29	62	29	42	70	74 S	SE	Clo.	
15			62	64	50	29	18	29	52	80	79 SW	SSW	Sto.	
16		,04	58	63	59	29	62	29	74	75	79 SSW	S	Fine	
17			57	62	46	29	70	29	84	80	79 SSW	W	Clo.	Rain
18		,06	52	65	42	30	10	30	13	77	80 W	NNW	Fine	Fine
19			46	64	43	30	10	29	97	80	77 NNW	S	Fog.	

The quantity of Rain fallen in the month of August was 1 in. 77-100ths.

NOTICE TO CORRESPONDENTS.

Mr. N. H.'s Letter shall be attended to.
 Mr. Sprague will shortly publish, in the REPOSITORY, Observations on many of the Preparations ordered in the London Pharmacopœia, with Suggestions.
 We return our thanks to Mr. C. Bell for his valuable Papers, lately read before the Royal Society. Also to Dr. Mackintyre for the Account of the Experiments lately made at Paris, on the Functions of the Nerves. — These, respectively, will receive our earliest attention.

*** Communications are requested to be addressed (post paid) to
 Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 119. NOVEMBER 1, 1823. VOL. XX.

PART I.

ORIGINAL COMMUNICATIONS.

I.

A singular Case of Umbilical Hernia, with Physiological Remarks. By THOMAS SUTTON, M.D. Greenwich, Member of the Royal College of Physicians, London.

SOME time ago, I was desired to visit, on Woolwich Common, with Mr. Fitzpatrick, a patient, who had an obstruction of the bowels, with incessant vomiting. It was pointed out to me that this patient for many years had laboured under a very considerable umbilical rupture, for the support of which he had contrived a convenient apparatus. I begged to see the state of this rupture, and found it supported by a tin case lined internally with wadding, and covered with soft leather, with which it was also covered externally. This apparatus was adapted to the form of the whole fore-part of the abdomen.

On its being removed I perceived the surface of the abdomen to be irregular, and adapted to the convolutions of the intestines. The abdominal muscles were completely removed; the umbilicus was actually thrust down into the groin of, I believe, the left side.

This had been the state of the parts for many years, during which this gentleman had enjoyed good health, taken a proper proportion of exercise, and had never been troubled

with any material complaint either in respiration or in the discharges of urine or *fæces*, nor had been otherwise inconvenienced than from the weakness and the weight of the parts, which he had remedied by his own contrivance, with, of course, the loss of the power of activity and flexibility of the trunk of the body.

The vomiting in this attack had been so incessant that for many hours every thing taken into the stomach, both food and medicine, was rejected. Clysters had been employed, but without producing the desired effect.

The first impression that this hernia would make upon the mind is its enormous size and extent; the abdominal muscles having been entirely removed from their position. The consideration that must next engage the attention, is the effects this morbid displacement had produced; and, lastly, the influence these might have upon the present diseased state of the patient. In a physiological point of view, we have been long taught that the abdominal muscles performed most important parts in the functions of respiration, digestion, assimilation of food, expulsion of urine and *fæces*, &c., in conjunction with, or in *counteraction* of, the action of the diaphragm. One would scarcely, indeed, think it possible, on reading some authors, that respiration could be performed without their necessary concurrence, and that otherwise many important functions must be at a stand. But in this case not only respiration has been performed with perfect convenience, but all the functions of the abdominal and pelvic cavities have gone on in a suitable and healthy manner, by the sole aid of a contrivance whose whole object was that of maintaining a support of the bowels, and in which there was no substitute for those supposed contractions and resistances to the action of the diaphragm upon the contents of the abdomen, which have been represented by authors as so necessary to the proper performance of many important functions.

I now hasten to say, that this state of things did not form any impediment to the recovery of the patient, who in the course of some hours was completely relieved, and soon arrived at his former state of health. We may hence conclude, that the importance of the abdominal muscles to animal life and health has been much overrated; and that they seem more adapted to support the contents of the cavity, than to perform any signal and active part in the various functions to which they have been hypothetically reported to have given essential aid. I may also be allowed to conclude, that this is almost their only necessary and most important office, when we perceive all the processes of chylification, assimilation, and healthy action, performed, while a machine, as a

substitute for the loss of their aid, was employed, and especially as the gentleman, the subject of this case, was inclined to be stont, and was of healthy appearance, with good appetite, although he must have arrived to at least the age of sixty. We cannot, indeed, expect an apparatus to perform every part assigned to the abdominal muscles, as it is certainly quite destitute of that pliable support of the parts which allows great activity, and variety of position and form. Yet this case shows, abating these advantages, that the functions of the abdominal viscera can be performed healthily by the aid of a plain mechanical contrivance, in the absence of the action of the abdominal muscles, and that such loss did not retard recovery from a most formidable disease. When I state the absence of their action in this case, I mean only to convey the idea that they were completely removed from the front surface of the abdomen, and could neither perform the functions of support nor of contraction. It is most probable that they did not exist in their usual form or shape, but had undergone absorption and various changes, as the consequence of their inactivity and displacement.

I am willing to believe that the same conclusions to which this case has led me, might have been justly attained by a careful view of the state of the abdominal muscles in various diseases, in which they have been so distended as to render them incapable of affording assistance to those various functions alluded to: such as, for instance, in great distentions of the abdomen by dropsical effusions and various tumours; or in cases of pendulous abdomen from repeated child-bearing, wherein these muscles have lost their power of contraction. In the former of which particularly, the muscles, through their great distention and attenuation, and weakness after tapping, must have been frequently perceived to retain very little power of counteraction. Yet in these cases, several, or occasionally all the functions of respiration, secretion, and expulsion of the contents of the abdomen, have gone forward without any essential aid from them. But such observations are not likely to be made or urged successfully in the face of a generally received and favourite hypothesis.

But this case certainly shows, more fully than these, that all the functions of the abdominal viscera had been well carried on without the aid of its muscles, and therefore refutes much of those theoretical uses already alluded to. One of the actions, among others, in which the agency of their contraction and resistance has been considered to be most necessary to its performance, is that of vomiting. The case related, however, proves incontestably that this action may be sustained without the active agency of these muscles,

as the vomiting was forcible, copious, and lasting, and the machine, as a substitute for them, which was always worn, could only afford support and resistance to over-distention. In fact, the stomach can, when under irritation for that purpose, expel its contents by vomiting, without any auxiliary aid, rather rendering all other concurring actions subordinate to its purpose than assisting. And why not? Is this half so wonderful as the action of the intestines which compels the food through their canals, frequently against the force of gravity, by their innate power of fabric, and in some disorders gives their contents a retrograde motion; in both which operations the action of the diaphragm or abdominal muscles can, upon no principle, be considered to be materially assisting? But complicated explanations of functions are often taken as marks of ingenuity, while the real and evident causes are placed in the back ground, or little dwelt upon, until they are nearly lost in an hypothetical mass of intricate, unfounded, and therefore unnatural suppositions.

Greenwich, September, 1823.

II.

Case of Enlarged Spleen, combined with Disease of the Serous Surfaces in both the large Cavities. By JAMES KING, Esq. Surgeon, Hamilton, N. B.

J. R. a tall young man, aged twenty, applied to me for advice on the 5th of November, 1821, in consequence of severe attacks of epistaxis, which had repeatedly troubled him since the middle of the preceding month. He was evidently of a scrofulous constitution, and the formation of his chest and general appearance distinctly marked a predisposition to phthisis, which appeared to be hereditary in his family. Up to the period above-mentioned he had enjoyed uninterrupted good health. He stated, that before every attack of the bleeding he was well aware of its approach, from a severe pain and swimming in his forehead, a sense of burning heat in his face, and throbbing of his temples, accompanied with a peculiar smell, which he was unable to describe. He had no other complaints, and during the intervals between the attacks his strength and appetite were unabated. His pulse was full, hard, and beating 90 in a minute; tongue furred; stools watery and frequent. I took from the arm twelve ounces of blood, and ordered a calomel purge, to be frequently repeated, in order to correct the state of his bowels. He was bled again on the 8th to the same extent, in conse-

quence of a severe return of his complaint; and as the state of his bowels was much the same, the medicine was ordered to be continued. After this bleeding he had but two attacks of his complaint during two months, and these were so very trifling as to require no attention. In other respects, however, he was far from being well; he had taken repeated doses of calomel and jalap, and other cathartics, which had operated severely, but still his tongue continued dry and foul, and his stools frequent, watery, and of a yellow colour; his urine was high-coloured and rather scanty; pulse 90, and vibrating to the touch; countenance pale and sallow. The following medicine was prescribed, and continued till the 26th, when his complaints were so far removed as to enable him to return to his employment:—

R Mass. Pil. Hydrarg. 3j.

———— Aloes. 3ss. M. b.

Et in pil. xxiv æq. divid. Un. omn. noct. sumend.

R Sulph. Magnes. ʒiss.

Supertart. Potas. ʒss.

Aq. Fontan. ℥iiss.

Ft. mistura, cujus capiat coch. iij. magna omne mane sequent.

He called on me again for advice in the beginning of January, 1823, when he informed me that he had had many returns of the epistaxis, but the quantity lost was so very trifling that he did not consider it in any way hurtful to his health. For a few days previous to this he had been troubled with a short dry cough, and a return of his bowel complaint, which he attributed to exposure to cold. There was now a great difference in his appearance; his face was pale, and his colour bad, and from being of a full habit of body, he was now much emaciated; his breathing was hurried; skin hot; tongue foul; pulse quick and full. Upon taking a full inspiration he felt no pain in his chest, nor did the cough produce any uneasiness. Considering his complaint to be phthisis in its incipient stage, I again bled him, applied a blister to the chest, and began the use of the prussic acid by giving a drop three times a day in a little syrup of ginger. He was frequently bled, and the blister occasionally repeated, during the two months I made use of this medicine, but still with little advantage, as his cough continued much the same, and the attacks of the epistaxis frequent, though never to any extent. His diet was strictly antiphlogistic, and consisted principally of milk. The prussic acid was gradually increased in quantity till he took doses of nine drops three times daily, without producing any visible effect on the constitution. About the beginning of March he felt, for the first time, a

dull, deep-seated pain in the hypochondriac regions; but on examining the abdomen carefully, no hardness or swelling could be felt, nor did severe pressure produce any uneasiness. His bowel complaint still continued, and he was becoming more and more emaciated.

A respectable Physician belonging to this place was consulted, who, supposing some hepatic derangement might exist, recommended alterative doses of mercury till the constitution became sufficiently affected. The medicines were instantly commenced by giving grain doses of calomel night and morning; in about three weeks the system became affected, and then it was only given in such quantity as was found necessary to keep up the action for six weeks longer, when it was entirely given up, as we conceived it had had a sufficient trial without producing any benefit. As soon as he was quite free of the influence of the medicine (about the end of May), we recommended him to go into the country, and try what change of air and exercise on horseback might do in alleviating his complaints.

I heard no more of my patient for six weeks, when he again called on me for further advice: he told me that he had, in compliance with my request, been in the country ever since I last saw him, and had daily, when the weather would permit, taken gentle exercise on horseback, and adhered strictly to the regimen I recommended. At first he thought he was benefited by the change, but for some time before his return he found himself getting daily worse: his cough and hurried respiration were not more urgent, but his appetite and strength, which, up to that time (July 10th), had been but little deranged, began daily to be impaired; and the dull pain which he felt in the hypochondriac regions, though not more severe, was now confined entirely to the left side, and when the abdominal muscles were relaxed, by carefully examining the part, I could feel a considerable, deep-seated, hard swelling. On examining the region of the liver, it appeared swelled, but no hardness could be felt, and severe pressure produced no uneasiness. His breathing still continued hurried—particularly so after taking any exercise; but he felt no pain in the chest even on taking a full inspiration. Next day I visited him along with two medical gentlemen; and after a careful examination, it was our opinion that the swelling of the left side was an enlargement of the spleen; and from the swelling of the right side, we likewise considered the liver to be the seat of considerable disease, and that the deranged state of the alimentary discharge might be owing to the vitiated secretion of that organ. The cough and anxious breathing, which had so long troubled

him, though certainly symptomatic of pulmonic disease, were attributed to the derangement supposed to exist in the abdominal cavity.

We again agreed to prescribe calomel, with mercurial friction on the parts affected, and to keep the system under the influence of that medicine for a time. We commenced by giving him pills containing one and a half grains of calomel night and morning, combined with opium, to prevent it from passing off by stool, and by rubbing in half a dram of strong mercurial ointment daily. On the tenth day his mouth was sufficiently affected, and afterwards the medicine was only prescribed in such quantity as was found necessary to keep up the effect. In this state he was kept for six weeks, and his strength supported by suitable nourishment. Under this treatment he daily became worse: he had repeated attacks of epistaxis, which were more severe than at any former period; these weakened him very much; his pulse became intermittent, and ranging from 110 to 130 in a minute; the swelling of the left side became more prominent and more tender to the touch; his cough and anxiety of breathing continued much in the same way; his extremities became anasarcaous, and water began to collect in the abdomen.

About the beginning of August he was first troubled with involuntary motions of the muscles of the lower jaw, and an inability to keep his mouth shut. These attacks troubled him frequently every day during the rest of his life, and continued about ten minutes each time. He was now more than ever troubled with diarrhoea, and the other symptoms of his complaint were so urgent that we had not the most distant hopes of his recovery. At this time, without any cause being known, he was attacked with severe rigors, soon followed by vomiting and great pain of the abdomen, much increased by the most gentle pressure. Leeches, repeated small blisters, and warm fomentations, were applied to the abdomen, and laxative and anodyne medicines given internally to alleviate his sufferings, but without producing any benefit: he died in a few days.

Sectio Cadaveris. — After removing the integuments of the abdomen, our attention was first directed to the peritoneum, which we found very much inflamed, thicker than natural, and quite opaque; its adhesion to the abdominal muscles was nearly destroyed by the intervention of a quantity of purulent matter; but to the omentum and abdominal viscera, with which it is in contact, it had formed many strong connexions, which it required considerable force to destroy. After removing these connexions, a quantity of a high-

coloured liquid (about one gallon and a half) was removed from the abdomen before proceeding farther with the dissection. On examining the stomach and alimentary tube, they were found much inflamed, and covered with a network of small vessels carrying red blood. Turning aside the intestines, so as to expose the tumour in the left side, we found that it was, as had been supposed, an enlargement of the spleen, which was found firmly adhering to the large end of the stomach, and to part of the transverse arch of the colon, by a tense, white, transparent membrane. We next removed this viscus from the abdomen, and found it very much enlarged indeed, not being less than seven or eight times its natural size; its coats had been chiefly affected with the inflammatory action, which had evidently extended to the intestinal tube: on cutting into its substance, a quantity of whitish fluid could be pressed out, but in colour, consistence, and other respects, it was quite natural. On examining the liver, it was found unaltered in structure, but considerably increased in size; the gall-bladder was nearly twice its natural size, and completely distended with bile of a brownish yellow colour. All the rest of the abdominal viscera were perfectly healthy. In the thorax the following were the morbid appearances:—The left lung was found healthy in every respect; but on examining the right cavity of the thorax, considerable disease was brought into view: it contained about half a gallon of a greenish watery fluid, which being removed, the lung of that side was found greatly diminished in size, and much firmer in texture than natural—so much so, that it could be of very little use as a respiratory organ; in many parts it was adhering firmly by short ligamentous bands to the pleura costalis. About five table-spoonsful of fluid were found in the pericardium, but the heart was found to be healthy.

Remarks.—It might be asked, after a careful review of the symptoms of this case, and the appearances seen on dissection, which was the primary complaint—the pulmonic complaint, or the enlargement of the spleen? or did they exist independent of each other, or originate from one and the same cause? These are questions which may perhaps admit of dispute; but it is my opinion that the disease in the chest was the primary complaint, and the exciting cause of all the organic derangement seen on dissection. It is also my opinion that the diseased structure of the right lung was the work of previous inflammatory action; but as he never felt any pain in the chest during his indisposition, that action could not have been severe. As soon as derangement existed to

any considerable extent in the lungs, their functions were of course much impaired; hence the pulmonic circulation must have been less perfect. To this I attribute the enlargement of the spleen, and partial increase in the size of the liver, as also the epistaxis: how far I am right, I leave it to others to judge. The appearances denoting more recent inflammatory action of the peritoneal surfaces I attribute either to pressure occasioned by the enlargement of the spleen, and the fluid acting as extraneous bodies; or to the inflammatory action having extended along continuous and similar tissues from the surface of the spleen: if the latter alternative be adopted, the effusion must be considered as the consequence of the previous inflammatory action, which effusion promoted a return of, or kept up, the already excited inflammation of the peritoneum. The effusion in the chest may be considered as having supervened to the old adhesions found in that situation; and may be viewed either as the consequence of the inflammation which gave rise to these adhesions, or as the effect of a subsequent relaxation of the capillaries in the pleura. Finally, the anasarca, at the close of the disease, was only the common result of debility.

Hamilton, July 14th, 1823.

III.

Case of extensive Congenital Division of both the Hard and Soft Palates, successfully treated by Mechanical Means. By JAMES SNELL, Dentist, Member of the Royal College of Surgeons in London.

[With an Engraving.]

THE extreme importance of any successful contrivance, in so distressing a defect as that of a fissured palate, will render unnecessary any apology for introducing the following case to the Profession.

An interesting young lady, now about sixteen years of age, has laboured under this distressful malformation from her birth. When an infant, it deprived her of the support of the breast,—the milk, when any could be drawn, being invariably ejected through the nose; and her articulation, from a later period to the time of my seeing her, was so defective as not to be understood but by those who were constantly about her. On her application to me about three months ago, the appearances were as follow:—The fissure, as may be seen by reference to the plate, commenced imme-

diately behind the two anterior incisors, extending back

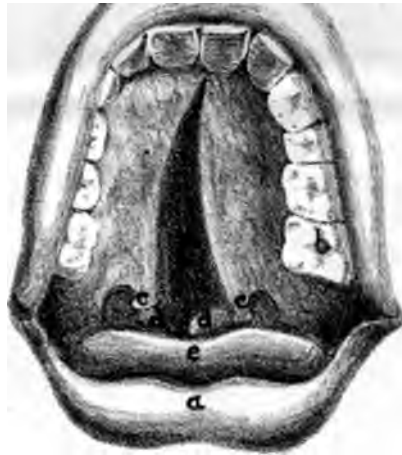
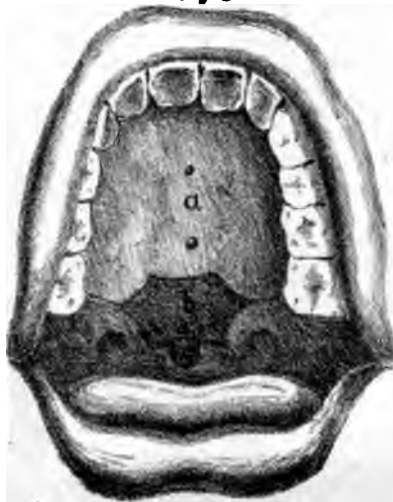


Fig 2



Fig 3



ital division of the Palate, successfully treated by J. Snell, Surgeon
me by J. Snell. *J. Ingray Lithog. 310.*



FIGURE 2.

*The Artificial Palate.**

- | | |
|--|---|
| <p><i>a</i> The Gold Plate.</p> <p><i>b</i> The lower Flap of Indian Rubber.</p> <p><i>c</i> The upper Flap.</p> | <p><i>d</i> The Ivory Piece.</p> <p><i>e</i> The Artificial Uvula.</p> <p><i>f</i> The Gold Spring.</p> |
|--|---|

FIGURE 3.

The Appearance of the Mouth with the Apparatus affixed.

- a* The Gold Plate.—*b* The lower Flap of Indian Rubber.—
c The Artificial Uvula.

IV.

Case of Vomiting of Blood, in which large Doses of the Supracetate of Lead proved a powerful Auxiliary Remedy. By J. DENTON, Esq. Surgeon, &c.

I PROCEED to state briefly the chief particulars of the following case, concerning which it appears to me unnecessary to make any remarks. The practical inference which it conveys, although by no means novel, should, however, be kept closer in view than I believe it generally to be: with that object I beg leave to submit the outline of the case to the readers of the *REPOSITORY*.

In May last, Mr. S. of Castle Street East, Oxford Street, of a spare habit, was seized with vomiting, without previous illness, and ejected nearly two quarts of blood. I saw him soon after his seizure, and was induced by the state of his pulse to take $\mathfrak{f}\mathfrak{ss}$. of blood from the arm, ordering, at the same time, an acid drink with the acid. sulph. aromat. and water, and a strong cathartic of the neutral salts with digitalis. I saw him again in two hours, and found the sickness had returned. The orifice of the vein from which he had been bled was therefore opened, and $\mathfrak{f}\mathfrak{ss}$. of blood was again abstracted, after which three grains of the plumbi superacetatæ, with five grains of the extractum conii, were prescribed, which dose was given every two hours: the third put a stop to the vomiting. The pills were now discontinued, and a mixture of neutral salts and infusion of roses with digitalis was substituted: a dose of this mixture was given every four hours, in order to prevent any deleterious

* Any medical gentleman feeling interested in this case may have an opportunity of seeing a model of the artificial palate at the author's, 21, Chapel Street, Edgeware Road.

effect from the superacetate of lead which he had taken. This mixture was continued for three or four days, at the expiration of which time the patient was perfectly recovered, and he is now in good health.

Castle Street, September 16th, 1823.

V.

Case of Purpura Hæmorrhagica. By EDWARD THOMPSON, Esq. Whitehaven, Member of the Royal College of Surgeons, London.

“De philosophorum hypothesibus parum solliciti, ea duntaxat quæ exhibet experientia adducemus.” — LIEUTAUD.

THE following case of purpura hæmorrhagica perhaps may not be found uninteresting. The disease is one upon which medical men have displayed, at different times, their learning and ingenuity, with, it must be regretted, but comparatively little success. Although we have many theories, Practitioners find it difficult to fix upon one leading to successful practice: emetics and bleeding, purges and tonics, have severally been recommended by those who have either viewed the complaint as bilious or inflammatory, congestive, or one of debility. As cases of failure might be adduced where each of these plans had been strictly pursued, it follows that none of them deserve our particular confidence, as they are all liable to aggravate some states of the disease, though they may assist in others. To set up the method pursued in the case of Nail as superior, is not, however, the object of this paper: it is only to give another instance of its effect in a case the most dangerous that commonly appears.

On the morning of Friday, June 21st, John Nail, a boy, ætatis five, was observed to be covered over the body and limbs with purple spots of various sizes, accompanied by effusion of blood from different parts. He had for a day or two before been very feverish; and the day before the eruption showed itself his whole skin was of a brightened colour, and extremely hot. On the 24th I visited him; he was then complaining of great pain in his bowels, of some headach and giddiness, and of excessive thirst; pulse 120; skin not hot, but completely covered, except on a small part of the face, which was deadly pale, with spots of a deep black colour. The back, belly, and limbs, were so studded, that the true colour of the skin could with difficulty be distinguished. They had burst in places weakly supported, and he was then bleeding from his eyes, mouth, nose, and slightly from his

ears. What was evacuated from the bowels was of the same colour as that effused from the eyes and other parts, except what was coughed up from the lungs; this was a little lighter in hue. I could not observe in the evacuations any appearance of feculent matter: they were much like what is passed in *melæna*. He had made his urine in the same vessel, and therefore I could not judge of the colour of it; the mother told me it was of a deep brown cast. The quantity of blood lost was described as being great previous to the visit; he was in consequence very weak. He expressed dissatisfaction on being raised up, as he turned very faint. The tongue was white and without fur, appearing as if destitute of blood; it was entirely free of *petechiæ*, giving it a singular look when compared with the surrounding parts, which were closely beset with them.

I had attended this boy about four months prior to this attack; he was afflicted at that time with three large collections of matter, all of which were opened and injected; they commenced within a week of each other. From the great drain of pus and irritative fever, he was reduced to the last state of debility, and was not expected to live; he, however, surmounted all danger, and grew strong and lusty.

The following mixture was now ordered him:—

R Ol. Terebinthin. ʒiv.
Vitelli Ovis, q. s.
Sacch. Alb. ʒvj.
Ol. Menth. gtt. iv.
Aq. Puræ, ʒv. M.

Cap. cochlear. j. largum tertiâ quâque horâ.

25th.—Pulse 112; thirst great; tongue white, but moist; bowels not open; oozing from nose and mouth; eyelids better; complains of pain in belly when moved or pressed upon; no appetite. The urine passed since the night of the 23d strongly tinged with blood.

R Ol. Castor. ʒij.
Ol. Terebinth. ʒij. M.

Cap. statim. Contin. Mist. Terebinth. ut heri.

26th.—Rather better; pulse 100; thirst not so great; bowels opened twice since last visit; *scæces* black, but not so fluid as hitherto; tongue clean and moist; blood flows occasionally from nose and eyes; expectoration tinged with blood; *petechiæ* very thick on the body—on the legs and arms they are more distinct, and they are somewhat raised about the middle of the back, shoulders, and neck; urine made freely, very deep in colour, but without blood; no griping in the belly; debility very great.

R Mist. cum Ol. Terebinth. ʒvj.

Ad Aq. Menth. ʒv. M.

Sumantur cochlear. duo ampla quater indies.

Vin. Rub. ʒiv.

27th. — Improving; petechiæ less black; hemorrhage from bowels, &c. not so great; fæces as yesterday; thirst less; no appetite; slept awhile in the night; pulse 100. Pergat.

28th. — In a state of improvement. — Pergat.

29th. — Symptoms as before. — Contin. ol. terebinth. et vin.

30th. — Symptoms all relieved; bowels regular, and fæces assuming a more natural appearance; bleeding continues from nose and gums occasionally; coughs up bloody mucus, but not frequently; able to take broths and arrow-root.

Contin. med.

July 2d. — [On the 1st I was not at liberty to see him. The report stated him to be improving.] Spots gradually disappearing; hemorrhage from mucous surfaces much abated; bowels freely opened three or four times a day, and natural.

3d. — Much better; petechiæ gradually becoming absorbed; appetite good; clots of blood occasionally coughed up from the lungs, and slight oozing from the nose and gums; the spots on the conjunctiva nearly gone; stools frequent, but of a natural colour; is now sitting up and feels stronger, yet not able to walk without support; complains a little of pain in the head and giddiness.

R Tinct. Calumb. ʒj.

Acid. Sulph. Dil. ʒij. M.

Cap. cochlear. j. minimum quartis horis. — Cont. Vin. Rub.

Rep. Mist. Terebinth. de quo sumatur cochlear. j. nocte manequæ.

4th. — Petechiæ disappearing very fast, and in every respect better; pulse regular; bowels open; urine rather deep in colour; slept well in the night; thirst gone. — Contin. medicamenta.

There was no report taken after this. I saw him at intervals for a short time, and by the 12th ceased attending him altogether. He has had no return of the complaint, and remains in perfect health.

The above case is, I think, a decided proof of the powerful action of the remedy employed. That other means might have been equally so, is at best problematical. Bleeding is a means very doubtful in its effects; and although we have the cases of Drs. Parry and Combe to direct us, we have others decidedly against it. It was a remedy much recommended

by the old Physicians, but it was seldom successful, in the disease designated by them the bloody small-pox. From the description given by Dr. Fuller and many others, there is reason to believe that purpura occasionally received that title. Thus we have an affection, receiving the name of small-pox, beginning with a quick pulse, soon succeeded by a general redness of the skin; this being soon followed by red spots, which turned purple,—then black, scarcely if at all elevated above the surface; and attended by hemorrhage from the bowels, &c. The practice pursued in cases like this, and in real small-pox, with petechiæ and hemorrhage, was precisely the same as that recommended by Dr. Parry.

Praise is due to Dr. Whitlock Nichol for having first exhibited oleum terebinth. in affections of this nature, and the success that has hitherto attended it speaks highly in its favour. In melæna I have seen the most decidedly good effects produced by it in several instances, and this is a disease not far removed from purpura. Morgagni found, in a person who died of melæna, several parts of the abdominal viscera studded with black spots, of which he says, doubtingly, "*Macula hæc gangrænosa fortasse fuit.*" The inside of the stomach and duodenum was of the colour of the fluid vomited. This agrees in part with the appearances presented on dissection of those cases of purpura at present before the Profession. If this does not establish the identity of the two diseases, it goes some way to prove that there is some relationship. The blood-vesels in both cases are not able to retain their contents, either from a loss in their contractile power, or actual tenderness in the coats themselves. It has been observed likewise, that obstruction, from enlarged liver or spleen, has led to the appearance of both diseases: I speak of the melæna cruenta according to Dr. Good.

The urine in Nail's case was not examined, for which omission I am sorry: it might have been done after it assumed its natural appearance; before that, serum would have undoubtedly been found, as blood formed a great part of what was evacuated. That much dependence ought to be placed on the circumstance of serum being always present in urine when an inflammatory diathesis exists, remains yet to be established. I lately saw a case of dropsy in which it was discovered, although the disease succeeded excessive hemorrhage, and was certainly caused by it, the health being good previous to the injury. In Dr. Combe's case the urine deposited serum; and from this he was induced to view purpura as bearing, "in one respect at least, a striking resemblance to inflammatory dropsies." Facts are wanting to strengthen this opinion. If ever depletion be required, it

must be in plethoric subjects, and merely to diminish momentum; if not employed early, in the very onset, in bad cases, it will hasten the fatal event.

There may be in some a predisposition to purpura, or a peculiar conformation in the vascular system, approaching to the hemorrhagic diathesis. I attended, about three years since, a singular case. It occurred in a boy about six years old; he was several times attacked with bleeding at the nose. Before this took place he was generally feverish a day or two; on its subsiding, more or fewer petechial spots made their appearance. He was at length carried off by hemorrhage from the nose in a single night. His mother told me he was seldom free from black spots, as the slightest knock produced one. The formation of the vessels in this case was such, and their structure so fragile, that it would appear the least increase in the impetus of the blood produced dilatation and rupture; constituting part of the third and fourth causes of Dr. Duncan's arrangement.

It will be observed that the turpentine was given with a view to its being absorbed or taken into the system. Something more than its mere purgative effect is to be looked for; and although this may be a concern of moment, still it is not the only one.

Whitehaven, October 11th, 1823.

VI.

Case of Acute Hydrocephalus, with Softening of the Brain. By THOMAS ROLPH, Esq. Surgeon, &c.

JAMES HALL, ætatis five, had been unwell some time with occasional headach and costiveness. September 5th, the day I first saw him, he appeared but slightly indisposed. He complained of pain in his head; the pulse was accelerated; the tongue slightly furred; the bowels hard, swollen, tense, and very constipated; urine high-coloured; his appetite bad; and he appeared rather irritable. I gave him the following powders and mixture:—

R Pulv. Jalapæ, gr. vj.

Hyd. Submuriat. gr. ij. M.

Divide in pulv. ij. hâc nocte et cras mane sumatur unus.

R Acid. Sulph. Dilut. gʳ. xij.

Syr. Rhœad. ʒij.

Aq. Puræ, ʒiij. M.

Ft. mist. coch. j. larg. 4tis. hor. sumendum.

On the morning of the 6th he appeared much amended;

the bowels had been opened twice, the stools were highly offensive, of a very dark colour, and loose. I ordered the powders and mixture to be repeated. In the evening he was attacked with a convulsive fit; and on being sent for, I found him quite insensible, with a rapid strong pulse, very florid countenance, and cold extremities. I took ten ounces of blood from his arm in a full stream, from which there was evident syncope. I administered three grains of calomel immediately, and ordered it to be repeated in four hours, also a mixture with *mv.* of *unct. digitalis*, to be taken every four hours, a cold lotion to be applied constantly to the head, and the feet to be immersed in warm water. He passed a quiet night.

On the 7th, although he was sensible, the bowels had not been acted on. I gave him three grains of scammony every two hours.

8th. — The bowels were still confined. With every powder he now took two grains of calomel, which brought away several very offensive, loose motions, of a dark muddy colour; his pulse was tranquil, his head seemed better, and there was moisture on the skin.

9th. — He was so much better, that his mother gave him the mixture he had at first: on this day, however, he had no motion. The bowels towards evening became hard and swollen, and the pulse more rapid. I then gave him a mixture, containing *zss. ol. ricini* in each dose, with two grains of calomel, every four hours. He took four doses, without the bowels being at all affected.

On the morning of the 11th he was violently sick, and the contents of the stomach resembled the evacuations from the bowels. I gave him the following powders: —

Hyd. c. Creta, gr. xvj.

Pulv. Jalapæ, gr. xij. M.

Divide in pulv. iv.; sumat unum 4tâ quâque horâ.

Neither of these powders remained on the stomach. At this time the symptoms assumed the strong and evident characters of hydrocephalus; the pupils were dilated, and the child was much disturbed at light and noise.

As the stomach was irritable, and rejected every thing, I gave him, on the 12th: —

Magnes. Sulph. 3ijj.

Infus. Rosæ, 3vj. M.

Ft. mist.—*coch. j. larg.* 2ndâ quâque horâ sumendum.

This mixture allayed the vomiting, but the bowels remained still confined.

13th. — The above mixture was repeated, and three grains

of calomel were given with each dose. The sickness returned, and the bowels still continued to be confined.

14th. — The same mixture was repeated, without the powders. This day and during the night he had several very loose, offensive stools, of considerable quantity, and of a very dark colour.

15th. — He seemed extremely dejected, he sighed continually, his pupils were very dilated, and strabismus was observed for the first time. There was great prostration of strength; he was perfectly sensible, and his pulse was very small and feeble. I gave him the following mixture:—

R Ammon. Carbonat. ʒj.

Pulv. Rhœi, 3ss.

Aq. Ment. Pip. ʒiv. M.

Ft. mist. Sumat coch. j. larg. 3tis horis.

16th. — Five stools of the same character as yesterday were passed, but they were more offensive. The mixture was repeated.

R Ung. Hyd. Fort. ʒiij.

Sp. Ammon. Comp. ʒij.

Ol. Amygdalæ, ʒvj. M.

Ft. embrocatio regioni abdominali nocte maneq. applicanda.

17th. — No stool this day. He sighed perpetually, and the inspirations seemed so long and deep as to attract particular attention. He was much worse; for although he had not been insensible since the convulsion fit, he appeared more irritable this day, and took less notice of objects than usual. The mixture was continued.

18th. — No evacuation.

R Hyd. Submuriat. gr. xvj.

Pulv. Jalapæ, 3ss. M.

Divide in pulv. iv.; sumat unum 4ta quâque horâ.

Evening. — No motion.

R Mannæ, ʒiij.

Infus. Sennæ, ʒiv. M.

Ft. mist. Sumat coch. j. larg. 2dis horis.

19th. — He had two copious stools, which were highly offensive, but not so dark-coloured as before. The mixture was repeated.

20th. — He had three stools, tinged with mucus and blood; he was this day quite insensible, and the pupils were immoveably fixed. The mixture was continued, and a large blister applied to the nape of the neck.

21st. — The bowels were still open, but nothing but a dark fluid, like muddy water, came away.

22d. — He was totally insensible to every thing.

23d. — He died.

On *examination*, we found considerable effusion between the tunica arachnoidea and the pia mater; the vessels of the dura mater were very turgid, the convolutions of the brain extremely indistinct, the substance of the brain was very soft, and the ventricles were filled with serous fluid. The optic nerves, at their origins, were nearly disorganized.

The thoracic cavity was filled with a very dark sanguineous fluid. The pleura was healthy. The left lung was highly inflamed, and both lungs were covered with tubercles.

The stomach, liver, and pancreas, were healthy. The spleen was completely covered with tubercles. The kidneys were healthy. The inner coat of the large intestines was more vascular than common.

In this case there were several remarkable phenomena: the liver, stomach, and pancreas, were quite healthy, whilst the evacuations were of the most foetid and unhealthy character. The lungs were loaded with tubercles, and the left lung highly inflamed; yet there was no cough nor difficulty of breathing. Although I saw this child every day from September 5th till the day he died, I did not observe one symptom of *active* inflammation all that time, except the evening on which he had the convulsion fit. *

Crutched Friars, October 2d, 1823.

* We have been induced to publish this case on account of the morbid appearances which it exhibited. In addition to the usual phenomena of acute hydrocephalus, softening of the brain — a structural derangement to which M. Rostan has particularly called the attention of the Profession — formed its prominent feature. Such cases are important, inasmuch as they draw our attention to the actual derangement going on in the system at the period of observation; as they enable us to mark the outward signs of disease with greater fidelity; and as they lead us to connect our therapeutical indications, in a more rational manner, with the nature and seat of disorder inferred at the time of observation, and to employ our remedies more correctly and more decidedly, as physical agents in the removal of morbid functions and structures. — EDITORS.

VII.

A Case of Laceration of the Perinæum, Urinary Bladder, and Rectum; with Observations on the Use and Abuse of the Vectis. By WILLIAM GAITSKELL, sen. Esq. Member of the Royal College of Surgeons, London.

MAY the 28th, 1822, I was requested to visit Mrs. A. a healthy woman, thirty-one years of age, who had been delivered a fortnight before by an obstetrical Practitioner in her neighbourhood. Mrs. A. informed me that she had sustained a very serious injury in her labour, and wished me to inquire into her situation and to render her my professional services: on soliciting the particulars of her case, she furnished me the following narrative:—

On the 12th of May, 1822, about seven in the morning, she felt symptoms of labour, and desired her Accoucheur to be sent for. He very soon attended, and assured her that the labour was a fair one, requiring no immediate assistance. He then left her, and called about ten, when she informed him that the pains were slight, but, if any thing, rather worse. He visited her again about one, when he examined into the progress of her labour, and assured her that every thing was doing well, and he hoped to deliver her about three. Between one and half-past two the pains slackened, when he requested her to lie on the bed in order that he might assist her, and assured her that five or six pains would deliver her. At this examination he put her to exquisite torture, and subjected her to a very different examination from those she had experienced in her former labours.*

Finding the pains lingering, and having limited his time of delivery, he had recourse to such strong mechanical power for the extraction of the child, as to require her being firmly held on the bed, and this he continued for the space of three hours, with only short intervals of rest: she often called out for time and patience, declaring to him, from her feelings, that the pains were not natural, but artificial; and stating that she had a frequent and strong desire to make water. But without attending to her entreaties or complying with her wishes, he still persisted in pulling; when, about six in the evening, the head of the child was extracted.†

* Mrs. A. had borne two living children at the full period of gestation, and was each time attended by a female midwife; from both which confinements she recovered and did well.

† The fœtus had several cuts on the face, marking the application

He now found a difficulty with the shoulders: to remedy this he asked for a roller, which he tied round the neck of the child, and pulled with such violence, that the shoulders, body of the child, and placenta, all came away together. He now desired her to be quiet for an hour; but she flooded so profusely that she grew faint, and was cautiously drawn up the bed to be placed more easy and comfortable. When the child was extracted, a sudden gush of urine took place,* occasioned by the rupture of the bladder; that viscus not having been emptied from four in the morning till six in the evening—a space of fourteen hours.

The next day Mrs. A. was pretty easy, and made a little water, but with great pain. On the third day the urine and fæces passed involuntarily, for she had no retentive power. This was mentioned to her Accoucheur, but he observed that it was of no consequence, as time would rectify every thing. However, instead of things improving, they grew worse; and although the urine continually drained into the lacerated parts, and produced the most severe torture, he never suggested a remedy for her sufferings, nor inquired into the nature of her injury.

After enduring for a fortnight the severest torments, occasioned by the constant draining of the urine from the torn bladder into an extensive sore, I was called upon to visit her. On examination, I found the perinæum lacerated quite into the rectum, so that the strong sphincter muscle of that part was completely divided in front; consequently, the internal surface of the vagina, mouth of the womb, internal membrane of the rectum, and raw surface of the torn perinæum, were constantly washed with urine. From the same cause, the thighs and nates were excoriated and acutely painful. I proposed the best relief in my power, but assured her relatives that a perfect cure was impossible.

To give the bladder (which was torn in its cervix) a chance of healing, I passed an elastic gum catheter into that viscus, through the urethra, leaving the external end to terminate in a quart wine-bottle, while the other remained constantly in the bladder. By this expedient the bottle received the urine, and prevented the bed being wetted, or the urinous smell becoming offensive.

This plan afforded her great comfort, and in six weeks allowed the bladder to assume a healing process. At the end

of the instrument, and the violent manner in which it had been employed.

* This was proved to be urine by the odour, the amniotic waters having been discharged three hours before, when the vectis was introduced for the extraction of the child.

of three months the whole secreted urine passed through the natural passage. *

The external sore was washed with some cooling lotion, and emollient poultices were repeatedly applied.

About six days after the adoption of the above plan, I requested the opinion of my friend Dr. Blundell, who very readily gave his gratuitous attendance. He examined the injury with the greatest attention, and fully approved of my remedial means.

Twelve months after this extensive injury, she informed me that she was totally deprived of sexual sensation, that the prolapsus of the uterus and vesica urinaria was increased and attended with pain and sense of weakness in her loins, and that she had no retentive power in the rectum.

The perusal of this unfortunate case will, I hope, induce the young or inexperienced Practitioner to weigh well in his mind all the minute circumstances of his patient's situation, and to be well convinced of the necessity of such interference, before he dares to hazard the awful responsibility of introducing an instrument into the womb of a parturient woman, and of forcibly extracting the child. That the life of a female, at this interesting period of her existence, should be put in jeopardy, or that she should be condemned to years of misery, from impatience of temper in the Practitioner, or from gross ignorance of his professional duty, is a subject of moment to every mind which is interested in the credit and respectability of this department of medical practice.

The instrument made use of in this case was the vectis or lever, than which I know of no instrument in the practice of midwifery so useful, and none so dangerous when injudiciously employed. With me it supersedes every other as a simple mechanical power. After a practice of thirty-nine years, I have never had occasion to use the forceps but twice, and they not answering my wishes, I finished the labour with the vectis. When the head of the fœtus is opened, and the brain disorganized with the crotchet, the judicious use of this powerful instrument will so compress the bones of the cranium, as to empty its cavity, and deliver

* The healing of a ruptured urinary bladder is of such rare occurrence, that if Dr. Blundell and myself had not satisfied ourselves of the fact of previous rupture by passing a female catheter through the opening into the vagina — [the rupture was so extensive, that Dr. B. passed two fingers from the vagina into the urinary bladder], — it might have been disputed by the Profession.

When the bladder sloughs, the opening remains for ever after unhealed, and a perpetual fistula is the consequence. There are only two instances on record of the bladder healing after throwing off a slough, as was mentioned to me by Dr. Blundell.

the woman with safety. In the present case, the extensive injury sustained by the mother, and the marks of violence on the face of the child, are so many proofs of the abuse of a valuable instrument, and tell nothing against its superiority. These injuries were evidently the result of too much mechanical violence, of a neglect of the axis of the pelvis, of the absence of natural pains to co-operate with the artificial power, and of a loaded urinary bladder.*

A few cursory Observations on the Use of the Vectis, and the best Mode of applying the Instrument.

The vectis should be thirteen inches in length, one half to form the handle, the other the curve. The handle should be made of hard wood, rendered rough for the purpose of obtaining a firmer hold, and made to screw on and off. When the instrument is made with a hinge handle, it is very inconvenient to introduce; therefore this construction of the instrument should never be adopted.

First, The os externum and internum should be perfectly dilated and relaxed, the amnion waters discharged, and nature allowed to exert her own power before art steps into her aid.

Secondly, The urinary bladder and rectum should be both emptied, either by nature or art, before the introduction of the instrument, for the purpose of removing the obstruction which a full bladder occasions, as well as of protecting adjoining viscera from mechanical injury.

Thirdly, The patient should be placed in a proper position: on the left side is the best, with the breech close to the edge of the bed, and the knees drawn up to the abdomen.

Fourthly, The position of the foetal head should be exactly ascertained, that the long axis of the head may be adapted to that of the pelvis. It should also be borne in mind, that the long axis of the upper brim of the pelvis crosses the lower one at right angles; when, therefore, the woman is on her side, the long axis of the upper brim is vertical, and the long axis of the lower horizontal.

By discovering the anterior fontanel, it will not be difficult to make out where the forehead of the foetus is placed, and by this may be marked all the other relations of the different axes of the head, and their correspondence with those of the pelvis.

Fifthly, The instrument should be well greased with soft pomatum or lard, the woman placed in a proper position, the foetal head correctly made out, and the urgency of the

* The bladder had not discharged its contents for fifteen hours.

case such as to justify the employment of an artificial power. The preliminaries being settled, the next thing is the safe introduction of the instrument. To do this with facility and safety, the Accoucheur should kneel on a pillow by the side of the bed, and introduce all the fingers into the vagina as far as the brim of the pelvis at the side of the sacral promontory (either right or left, according to the situation of the occiput). As he passes up the instrument, the fingers should be gradually withdrawn. The instrument is now to be pressed up into the cavity of the uterus, being careful that it is in the inside, and not on the outside, gliding it over the parietal bone till the screw part of the handle presses on the fourchette of the os externum. This attained, the handle should now be held firmly with the right hand, while the index and middle finger of the left, fixed about two inches from the screw part within the vagina, become a fulcrum. On this fulcrum, or point of support, the instrument is made to move from the sacro-iliac symphysis, toward the hollow of the ilium, by the action of the right hand on the handle. In this way it describes the section of a circle, and glides on to the occiput. Should the occiput point to the right ilium, the left hand must be employed; if to the left ilium, the right hand must be used.

When a labour pain takes place, the Accoucheur should gently aid it by drawing down in the line of the axis of the pelvis, i. e. in an imaginary line directed from the umbilicus through the centre of the axis of the pelvis. In this way the occiput is depressed while the chin approaches the child's breast, and its head is reduced to the smallest compass, and is thus enabled to pass through the cavity of the pelvis. As soon as the occiput is brought so low as to press on the perinæum, the instrument should be withdrawn, and reintroduced with the usual precautions.

The object now in view is to place the instrument over the face of the child. To effect this, the hand must be passed up, as at first directed, to the right or left sacro-sciatic symphysis, according to the situation of the face. When the instrument gets above the brim of the pelvis, a finger or two must be inserted by the side of the instrument, and pressed on it till it passes over the forehead on to the face, so as to embrace the chin. An imaginary line drawn through the centre of the child's mouth, ear, and occiput, is the present situation of the instrument, and quite the reverse of what it was before. The Practitioner has nothing now to do but to draw down during the time of pain, increasing his power according to the degree of resistance. The mechanical turn of the head, viz. the face of the child to the hollow of the sacrum, and the occiput to the arch of the pelvis, generally

takes place spontaneously during the descent of the head, though sometimes, but not one in a hundred, this mechanical turn of the head wants watching; the face should turn forward, and the occiput backward.

Having concluded my observations on the use of the vectis, I shall now enumerate the various ways in which this most valuable instrument may be abused.

First, An attempt to introduce the vectis before the external parts are properly relaxed, and the os uteri fully dilated, or the amniotic fluid discharged.

Second, An incautious mode of passing the instrument, so as by the violence and wrong direction to rupture the parietes of the uterus.

Third, The employment of an extracting power, without bearing in mind the different axes of the pelvis, and position of the foetal head in relation to those axes.

Fourth, The passing the instrument on the outside of the uterus instead of within its cavity.

Fifth, The use of power without waiting for natural pain, so as to make a labour completely artificial.

Sixth, The keeping a constant pressure on the foetal head in the interval of the labour pains, which endangers the life of the child, by compressing the funis, and stopping the circulation of the blood. In this way, I firmly believe, the destruction of many children during parturition is accomplished by the vectis. When the waters are discharged and the cavity of the uterus lessened, the funis falls on the face like a coiled rope, and is exposed to the hazard of mechanical compression. To prevent this accident, I never use the instrument but during a pain; and when the pain ceases, I raise the instrument about half an inch from the face to prevent the destruction of the child.

From these observations, it therefore follows that the vectis is an instrument in surgery — of which midwifery is a branch — which is dangerous or useful according to the hand that uses it, and the head that directs it; and it may be said of it, as of every other instrument and of every other remedial agent employed in the various departments of medical science, that it is neither a safe nor a beneficial means of aid, unless it becomes such in consequence of its judicious and discriminating employment. The excellent observation of Boerhaave, "*Nullum ego cognosco remedium nisi quod tempestivo usu fiat tale*," is as applicable to the use of obstetrical instruments as to any substance employed in the practice of physic.

Rotherhithe, Sept. 1823.

VIII.

Contributions to Pathology.—No. II. *Cases of Aneurism of the Aorta.* By JOSEPH WARD, Esq. Member of the Royal College of Surgeons, and Apothecary to the London Hospital.

THE three following cases of aneurism of the aorta occurred within a very short period; they evinced many of the symptoms of cynanche laryngea when it assumes a chronic form, and sufficiently proved the difficulty of diagnosis between these two disorders. As every circumstance that can throw light on so interesting a subject as aneurism of the aorta most assuredly is, must be acceptable to the pathologist, I am induced to place the particulars of these cases before the Profession.

CASE I.

Mary Jones, ætatis twenty-three, applied for relief December 11th, 1822. She had been ill four months; her complaints commencing with cough and expectoration, which were worse at night, being unable to lie down for some hours. At this date she perspired very freely, which she attributed to the exertion of coughing, and complained of pain in the trachea just above the sternum, which was greatly increased by deglutition, solid substances always being returned: fluids were swallowed easily. Her face was sometimes flushed. Pulse 96; bowels costive; urine plentiful, high-coloured, and depositing a lateritious sediment; feet very cold.

She received constant medical attendance till her death: her symptoms, notwithstanding, remained for the most part unrelieved. She was purged; leeches were frequently applied to the throat; blisters were employed; and the *ung. antim. tart.* was resorted to till it produced a pustular eruption, which afforded her some little benefit. In the course of her illness, she had three or four sudden attacks of dyspnoea, which threatened her life; they appeared to be produced by a large collection of mucus in the bronchial tubes: when in this state, she always experienced much relief from emetics.

June 4th.—Complained of pain and fulness above the right clavicle, but no pulsation was felt there: these sensations were relieved, and appeared to subside, in consequence of the application of a few leeches.

July 2d.—From irritation produced by a blister, inflammation came on under the left breast, which terminated in

suppuration, during which time, until the abscess healed, there was a complete cessation of all the bad symptoms;—her breathing was very comfortable; she could lie down at night; and the mucous expectoration was much diminished. As she now felt herself much better, she very incautiously over-exerted herself, when all the symptoms became aggravated: respiration was now performed with difficulty; her lips and countenance were of a pallid hue; the mucus in the trachea became increased in quantity, and was expectorated with difficulty, and cold sweats supervened. This state continued for a few days: she sank under it on the 6th August, 1823.

Dissection.—On examination of the body, the following appearances presented themselves:—No disease was observed in the larynx. The trachea, just above the bronchias, was so completely compressed by an aneurism, as to bring its anterior and posterior sides nearly into a state of approximation. The lining membrane of the trachea presented a red blush, without any evidence of suppuration.

The aneurism was of considerable magnitude, and arose from the arch of the aorta, having a sulcus in its centre filled by the trachea. There was another aneurism in the aorta, where it passes between the crura of the diaphragm, which had produced much absorption in the bodies of three of the vertebræ.

CASE II.

John Berry, ætatis thirty-four, has been ill twelve months. He was taken at first with cough and shortness of breathing. The cough was very troublesome, and without expectoration.

August 5th. — At this time he had very considerable wheezing during inspiration, which was occasionally accomplished with much difficulty. He also complained of some pain in his chest; of very difficult deglutition, being altogether unable to swallow solid food; and even fluids were taken with much uneasiness. He had been unable, for the last six weeks, even to sit up, being obliged to bring his head forwards, resting it nearly on his knees: raising himself into the erect posture only for a few seconds caused him the greatest distress. His voice was scarcely altered.—Ten leeches were ordered to his throat, and the pulv. ipecac. comp. was given with hydr. subm. in small doses every six hours.

August 6th. — Remained nearly as yesterday. Towards the evening, the dyspnœa being much increased, it was thought he might receive some benefit from the operation of tracheotomy, which was accordingly performed. At the time of the

operation, he lost a considerable quantity of blood suddenly from some varicose veins, and he was somewhat relieved. This relief continued, however, but a short time, as all the evil symptoms gradually increased. He was unable to keep a canula in the opening, it being constantly forced out.

August 7th. — Much worse; dyspnœa greater. He was unable to swallow any thing. His pulse, which formerly was rather full and not much accelerated, now faltered, and on the following morning he died.

Dissection. — On examination, an aneurism was found in the arch of the aorta, occasioning much pressure on the trachea immediately above the bronchiæ. The aorta was much enlarged throughout its whole length. The lining membrane of the trachea was discoloured and covered with mucus. Somewhat extensive inflammation was present in the cellular substance of the muscles of the neck, on the right side, which was attended with a large deposition of coagulable lymph.

CASE III.

August 5th. — William Friar, ætatis thirty-one, had been ill about six weeks. He was first affected with pain in the left side of his chest, which came on, as he supposes, in consequence of a severe cold. He afterwards felt a general soreness in his chest, with a sense of suffocation. His breathing became difficult, and inspiration very stridulous. His speech has been impaired about three weeks. He was, at this time, unable to speak above a whisper; had no pain in the larynx itself, but considerable pain lower down, about the centre of the chest; was unable to swallow solids, and fluids passed with difficulty. Cough was troublesome; expectoration much, and at times with difficulty; tongue slightly coated; bowels open; sleep disturbed by distress in breathing. The pulse in the right arm was scarcely to be felt; in the left arm it was nearly natural.

He was bled to the extent of sixteen ounces; a blister was applied to the throat, and calomel and Dover's powder were given every six hours.

August 6th and 7th. — Twelve leeches were applied each day, and a blister between the shoulders. He remained unrelieved.

8th. — He fell down dead in the act of walking.

Dissection. — The first remarkable circumstance which presented itself on examination, was the right carotid artery crossing the trachea immediately below the cricoid cartilage, it being thrust into that situation by an aneurism from the arch of the aorta. The aneurism pressed on the two bronchiæ,

and upon the œsophagus, into which it had ulcerated and burst; and about two pounds of coagulated blood were found in the stomach. The ulceration in the œsophagus was to a very considerable extent. The larynx was healthy.

Remarks.—From these three cases, it appears that an aneurism in the aorta may produce, from its mechanical pressure, a train of symptoms which bear a very close analogy to cynanche laryngea. In the first case, the continual existence of the exciting cause induced that state of inflammation of the membrane, which we should naturally expect to find in this latter disease. When we observe that the application of a few leeches was sufficient to relieve the urgency of these symptoms, we should hardly have been inclined to think beforehand that there existed any arterial tumour, upon which this small bleeding could have had such an effect. The relief too which was experienced by the counter-irritation in the breast would have tended, in a great measure, to confirm the opinion that it did not depend on any mechanical cause which was constantly present, but upon an inflammatory action originally existing in the membrane itself.

The second case, however, does not bear so great a similarity to cynanche laryngea. There were symptoms which might perhaps have led us to a different diagnosis: the difficulty of keeping the head erect, and the unimpaired power of the voice, are not symptoms which we are accustomed to find present in cynanche laryngea, but which were satisfactorily explained by the examination of the body.

The third case more nearly resembles cynanche laryngea than either of the others; the stridulous inspiration was better marked, as well as the loss of voice and the difficulty of deglutition. In this case there existed a circumstance which, perhaps, may not be altogether undeserving of remark. The operation of tracheotomy was directed to be performed, if this man had suffered a sudden attack of excessive dyspnœa. His sudden death, however, prevented the operation. It was mentioned, when detailing the appearances on dissection, that the right carotid artery was found crossing the trachea obliquely, and immediately below the cricoid cartilage: if, therefore, the operation had been performed, it is not improbable that this artery would have been opened into, more particularly when we consider that the violent action of the trachea would render it difficult to have observed the pulsation of the artery in this unnatural situation.

London Hospital, 12th October, 1823.

IX.

A General Report of the Medical Diseases treated in the Kent and Canterbury Hospital, from January 1st to July 1st 1823, with a particular Account of the more important Cases. By HARRY WILLIAM CARTER, M.D. F.R.S. &c. Senior Physician to that Institution, &c. &c.

THE practice of an hospital affords many advantages, many facilities for observation and experiment, which private practice, however extensive it may be, cannot supply. Accordingly, we find that well-digested hospital reports are among our most valuable records in medicine and surgery—witness those which have latterly appeared in the *Dublin Transactions*. My own experience in this department of practice is indeed very limited, when compared with that of the distinguished individuals whose names are prefixed to the *Dublin Reports*; yet I am anxious to contribute my mite to the mass of valuable information which the medical world owes to them. I would tread in their steps, and, to the best of my ability, render the advantages I enjoy in the prosecution of my profession useful to others, as well as to myself.

It is therefore my intention to offer, from time to time, a catalogue of the diseases which it may fall to my lot to treat at the Kent and Canterbury Hospital,* *subjoining a brief notice of such cases as may seem to merit more particular attention.* With this, my first essay, I have taken some pains; but as I am by no means satisfied with it myself, I can scarcely expect my readers not to find it very open to objections. I trust, however, that, as I become more conversant with my employment, I may succeed better, and I hope I shall be allowed to profit by the suggestions of some of those

* The Kent and Canterbury Hospital is situated in a pleasant and airy spot, within the precinct of the once magnificent monastery of St. Augustine, in the eastern suburb of the city. The first stone of the building was laid June 9th, 1791, and the hospital was opened in part for the reception of patients April 26th, 1793. When the late William Carter, M.D. first proposed the erection of an hospital for Kent, and submitted his proposal to the leading people of the county, there was a prevalent opinion among them that it would not succeed. My father, however, persevered, and the event fully answered his expectations. The difficulty now is to find room for the numerous applicants. The daily average of in-patients last year was 59, and that of out-patients 318. Vaccination is performed gratis once every week.

who may honour these pages with a perusal. The friendly counsel of my professional brethren I shall be forward to acknowledge with gratitude; and their hints I shall, wherever it is possible to do so, embrace. To some, perhaps, my record of cases may seem jejune, and the cases themselves uninteresting; but it is not to be expected that the wards of a provincial hospital should afford many cases worth particular mention, or very interesting, according to the usual acceptation of the term. The Physician's patients consist of persons from the country, and of inhabitants of the city and its vicinity, who, for the most part, do not apply to the hospital for relief till their complaints have subsisted for a long period, and they have gone through the common routine of treatment at their own habitations. Persons, again, are not unfrequently admitted in a state which must preclude all hope of their receiving benefit; for although it be contrary to a standing rule to admit those who are in a hopeless or dying condition, and although the introduction of such patients frequently shuts the door against others who might derive benefit from the institution, yet common humanity forbids our sending them back, many miles perhaps into the country. I have often urged upon the weekly board of governors the expediency of cautioning the country subscribers, and parish officers in particular, against sending patients merely upon their own judgment. They ought first to consult some respectable Practitioner in their neighbourhood as to the probability of the patient's receiving benefit at the hospital. Cases of very ancient date, and hopeless cases, excepting those where the bodies are examined after death, it were useless to give in detail. The same may be said of others, which, though they might with propriety be referred to the poor-house, we can scarcely exclude, because we are well aware how much may be done for them by the quiet and the nourishment of the hospital, as well as by tonic and cordial medicines. These cases of general debility from poor living, hard labour, &c. (and they are numerous), offer nothing of interest. Hence the paucity of cases which I have recorded.*

I shall conclude this preface with a word or two respecting out-patients. This is a class which constitutes the great burden of every hospital. The Physician is, by the rules, required to see them but once a week. If he have much private practice, he can scarcely see them more frequently, however desirous he may be of doing so; and even were he to offer to see them, they would hardly attend, for many of them

* Contagious diseases, of whatever description, are excluded.

find once a week too often. Between each visit a thousand things occur to counteract the effects of the remedies prescribed. Hard labour, scanty and improper food, deficiency of fuel and of clothing, bad lodging, exposure to wet and cold in their daily occupations—intemperance in some instances: all these causes conspire to render our attempts to relieve the out-patients too often nugatory. My report, as far as relates to them, is to me far from satisfactory; yet I hope to be enabled to record a few cases not totally devoid of interest from among their number.

I now proceed to give, in the first place, a statement of patients under my care from January 1st to July 1st, 1823:—

In-Patients.

Males	- - - -	60	} Total 114.		
Females	- - - -	54			
				Males.	Females.
Cured	- - - - -	15		11	
Received benefit	- - - - -	14		11	
Received no benefit	- - - - -	4		2	
Made out-patients	- - - - -	19		12	
Referred to the Surgeon	- - - - -	1		3	
Discharged for irregularity	- - - - -	1		2	
Died	- - - - -	2		3	
Under treatment	- - - - -	4		10	
		60		54	

Out-Patients.

Males	- - - -	63	} Total 187.		
Females	- - - -	124			
				Males.	Females.
Cured	- - - - -	16		18	
Received benefit	- - - - -	5		22	
Received no benefit	- - - - -	2		3	
Discharged for non-attendance	- - - - -	2		10	
Referred to the Surgeon	- - - - -	2		6	
Died	- - - - -	2		4	
Under treatment	- - - - -	30		56	
		59		119	
Total 178.					

Of the out-patients nine are unaccounted for. No tidings respecting them could be collected.* It is to be observed, that those out-patients who were afterwards admitted into the hospital are not included in the preceding list.

* They may be added to those discharged for non-attendance.

STATEMENT OF DISEASES OF IN-PATIENTS.

Apoplexy - - - - -	1	Brought forward - -	60
Amenorrhœa - - - - -	4	Hysteria - - - - -	2
Breast, tumour of - - -	1	Icterus - - - - -	1
Bronchocele - - - - -	2	Liver, abscess of - - -	1
Chorea - - - - -	1	Menorrhagia - - - - -	2
Debility, general - - -	5	Marasmus - - - - -	1
Diarrhœa - - - - -	2	Obstipatio - - - - -	2
Digestive organs, chronic af-		Œsophagus, stricture of -	1
fection of - - - - -	20	Paralysis - - - - -	3
Dropsy - - - - -	3	Peritonitis, chronic - - -	3
Dysmenorrhœa - - - - -	1	Phthisis - - - - -	6
Epilepsy - - - - -	2	Psoas abscess - - - - -	1
Fever, intermittent - - -	1	Pylorus, stricture of - - -	1
— continued - - - - -	1	Rheumatism, acute - - -	2
Head, affection of - - -	4	— chronic - - - - -	13
Hæmoptœ - - - - -	2	Scorbutus - - - - -	2
Heart, organic affection of	3	Scrofula - - - - -	1
Hepatitis - - - - -	2	Thorax, chronic affection of	8
Hydrothorax - - - - -	4	Uterus, disease of - - -	3
Hypochondriasis - - - -	1	Worms - - - - -	1
	60		114

STATEMENT OF DISEASES OF OUT-PATIENTS.

Anasarca - - - - -	2	Brought forward - -	70
Amenorrhœa - - - - -	1	Hooping-cough - - - - -	1
Asthma - - - - -	2	Hydrothorax - - - - -	5
Breast, scrofulous enlarge-		Hysteria - - - - -	19
ment of - - - - -	1	Leucorrhœa - - - - -	1
Bladder, disease of - - -	1	Melancholia - - - - -	3
Calculus - - - - -	2	Menorrhagia - - - - -	6
Chorea - - - - -	2	Mesenteric disease - - -	6
Diarrhœa - - - - -	2	Neuralgia faciei - - - -	2
Dysentery - - - - -	2	Obstipatio - - - - -	1
Debility, general - - -	11	Ophthalmia - - - - -	1
Digestive organs, chronic		Ovarial dropsy - - - - -	1
disease of - - - - -	17	Peritonitis, chronic - - -	1
Epilepsy - - - - -	1	Paralysis - - - - -	4
Eruptions - - - - -	9	Phthisis, confirmed - - -	11
Eneuresis - - - - -	1	— incipiens - - - - -	7
Febris, intermittent - - -	2	Psora - - - - -	1
— continued - - - - -	1	Purpura - - - - -	1
Head, pain of - - - - -	6	Pylorus, stricture of - - -	1
Hæmoptœ - - - - -	1	Pyrosis - - - - -	2
Hepatitis, chronic - - -	6	Rheumatism, chronic - - -	7
	70	Carry forward - - - - -	151

STATEMENT OF DISEASES OF OUT-PATIENTS — *Continued*.

Brought forward	- - -	151	Brought forward	- - -	158
Ringworm of scalp	- - -	1	Suppressio mensium	- - -	3
Scarlatina	- - -	1	Thorax, chronic affection of	- - -	11
Scrofula	- - -	3	Tympanitis	- - -	1
Splenitis	- - -	1	Uterus, disease of	- - -	1
Scorbutus	- - -	1	Worms	- - -	1
		158			176

ABSTRACT OF CASES SELECTED FROM THE PRECEDING LIST.

No. I. — *Case of Diabetes Mellitus.*

George Smith, ætatis thirty-three, day-labourer, was admitted into the hospital January 3d, 1823, labouring under diabetes. This man had formerly been under my care for chronic laryngitis, which terminated in thickening of the membrane lining the larynx, causing, of course, permanent hoarseness. He was decidedly of that temperament of which diabetic patients usually are, viz. the strumous. The disease was well-marked; for although the quantity of urine was much less than often occurs in diabetes, its quality was distinctly saccharine, and in appearance it resembled capillaire and water. The patient had remarked the increase and the altered quality of the urine for about six weeks. He complained of a variety of dyspeptic symptoms, cardialgia, craving appetite, distressing thirst. His bowels were inclined to be costive, and whenever he neglected them, the secretion of urine was greater. His tongue was covered by a slimy mucus, beneath which a morbid redness was perceptible. His pulse was frequent and feeble; his surface hot, and without the slightest perspiration. Anaphrodisia.* He would have rested well at night but for the incessant calls to pass urine. The quantity of urine was directed to be accurately measured.

4th. — Rather more than eight pints of limpid water had been passed from eight o'clock, P. M. to seven in the morning. Only half a pint of beer drank. Under the impression

* Does not this symptom generally occur where the kidneys have been stimulated to secrete inordinately, and the stimulus has been kept up for some time? Drinking soda-water in large quantities has, I believe, been found to produce anaphrodisia. The water of the Seine possesses, as every one knows, rather a laxative quality, and is also very diuretic. I know of one instance where its exclusive use greatly impaired the sexual feeling for the time.

that the disease depended upon derangement of the digestive organs, I prescribed as follows : —

R Infusi Caryophyll.; — Infusi Quassiae, āā 3v.; — Magnes. 3j.; — Tinct. Humuli, 3j. — Misce, ft. haustus, omni nocte sumend.

R Ferri Subcarb. ℥ss.; Sodæ Exsicc. gr. vj.; Rhei Pulv. gr. iij.; Misce, fiat pulvis, ter die sumend.

Toast and water in moderation. No vegetables. Little bread. Plain roast or boiled meat.

5th. — Eight pints of urine during the day; a quantity exceeding the liquid taken by one quart. Four pints of urine in the night. Half a pint of fluid taken. — Pergat.

6th. Urine in 24 hours, 8 pints. Fluid taken, 4 pints.

7th. _____ 9 _____ 5 _____

8th. _____ 8 _____ 5 _____

He was directed to continue the powders, and, as he still complained of troublesome cardialgia, to take the night draught as before with twelve grains of potass. subcarb. instead of the magnesia, and five grains of blue pill every night.

11th. — The alkaline subcarbonate had certainly increased the discharge by the kidneys, without at all seeming to diminish the acidity of stomach. The urine continued very sweet. Appetite was more natural. He complained of what he termed a *drawing* sensation from the kidneys along the course of the ureters to the bladder. I scarcely comprehend what he meant; perhaps it was forcing.

11th. Urine in 24 hours, 6 pints. Fluid taken, 3 pints.

12th. _____ 6 _____ 4 _____

The alkali having been discontinued on the 11th, the quantity of urine became unimportant, but its *quality* continued as before. I prescribed at night a grain and a half of opium.

On the 14th and 15th the patient was very ill. The opium had disagreed, exciting great heat and uneasiness, while it had completely failed in procuring perspiration, or in checking the secretion of urine in any way. A saline mixture was now ordered, and ℥ss. of Dover's powder at bedtime.

16th. — The patient *had perspired profusely in the night, and the perspiration had a peculiar faint saccharine smell, similar to that of the urine.* The bowels were considerably relaxed. Pulse frequent. Tongue brown, in consequence of the opiate, but moist. Appetite little. *Only one pint of urine has been passed in the twenty-four hours.* Observe the effect of the diaphoresis.

17th. — Urine in twenty-four hours, six pints. Pulse 76.

Tongue foul. Has rested ill. *Perspiration had ceased entirely.* Augéatur pulv. ipec. c. ad gr. xv.

From the 20th to the 25th, owing to some mistake, the patient took no medicine. The urine was now increased to thirteen pints. He was feeble, and emaciated rapidly. A mixture with decoct. cinch., tinct. ferri muriat.,* pulv. myrrhæ, and sp. lavand. c., was ordered: a dose to be taken every four hours. Blue pill with opium at night. Hard eggs as the chief article of food.†

February 1st.—The diet which had been prescribed did not agree. It oppressed his stomach. On this day, influenced, I confess, rather by authority than led by experience, I directed that the patient should be bled to 3xvj. The blood was neither cupped nor buffy, nor firm, and the depletion did rather harm than good. The relative quantities of urine and of fluid taken in were at this time as follows:—

February.	Urine in 24 hours.	Fluid taken.
4th.....	7 pints.....	5 pints.
5th.....	7 ———	5 ———
6th.....	7 ———	3½ ———
7th.....	7 ———	4 ———
8th.....	6 ———	5 ———
9th.....	5½ ———	3½ ———
10th.....	5½ ———	4 ———
11th.....	5½ ———	4 ———
12th.....	5½ ———	4 ———
13th.....	7 ———	5 ———
14th.....	5 ———	4 ———

About this time he began taking the prussic acid, and it was continued till March 21st. His general health seemed to improve under its use. His dyspeptic symptoms seemed to be relieved, but the disease was not diminished. At length his sight began to suffer from the medicine, and I was obliged to discontinue it. During this period his bowels were costive, and he took occasionally a pill, containing half a minim of croton oil, which operated extremely well.

I should have mentioned that he was made out-patient, February 21st, at his own desire.

* I shall perhaps be told that the preparations of iron are incompatible with cinchona. I know, however, from experience, that the combination is a useful one, and I therefore continue to prescribe it.

† This direction as to diet may seem whimsical enough, but I was led to it by having heard long ago of a case of diabetes which was supposed to have been cured by this kind of food, and in a disease so generally fatal, I was inclined to make trial of every thing that had been recommended.

About the middle of March he caught cold, and the quantity of urine was again greatly increased.

On the 4th of April the diabetes suddenly ceased, without any assignable cause, and distressing strangury ensued. This soon yielded to tinct. ferri murialis, and an opium pill at night, and the urine became again sweet and too copious.

About this time the third volume of the Dublin Hospital Reports fell into my hands, and Dr. Marsh's paper on diabetes of course attracted my attention forcibly. His recommendation of opium is not new : * it was his statement respecting the warm bath, and the exciting of profuse perspiration by hard labour, that attracted me. I determined to give both a trial in the present case. The warm bath, both simply and with tinct. opii, caused excessive sickness and languor, and the patient could not be persuaded to continue it. Hard work, aided by warm clothing, and a scruple of Dover's powder at night, entirely removed the disease.

At the beginning of June he was *quite well*, and left off medicine, and on the 13th he was discharged.

I feel perfectly satisfied that Smith was free from diabetes when he left the hospital, and I cannot but ascribe the removal of the complaint to the profuse perspiration induced chiefly by hard labour and warm clothing.

Since his dismissal the disease has, I understand, returned, owing, I dare say, to irregular living; but the man has not applied to me. This does no discredit to the treatment which succeeded while he was under my observation, and should by no means shake our confidence in the plan proposed in Dr. Marsh's excellent paper.

No. II. *Case of Chronic Encephalitis, with Congestion, and perhaps incipient Effusion of Aqueous Fluid.*

Joseph Hawker, ætatis nine, was admitted March 14th. This was really an interesting case. The boy complained of great pain of the head, and his countenance evidenced that he was suffering much. He was unable to raise his eyelids. The eyes themselves were void of lustre, and the pupils exceedingly dilated. He was drowsy, and averse from all exertion. His pulse was slow, and I think it occasionally intermitted. Tongue foul. His bowels were in a torpid state. Urine natural. Suspecting that worms might be the cause of all these unpleasant symptoms, I prescribed olei terebinth. ʒvj., syr. rosæ ʒss., to be taken immediately, and

* See cases recorded in Vol. IV. of the Medical Transactions of the London College of Physicians, by Dr. Warren.

to be repeated in four hours if the first dose should not operate.

15th.—The first dose produced little effect, and no worms appeared. The second dose had not been given.—*Repet. oleum terebinth. cum olei crotonis mas.*

This draught operated briskly, but there were no worms, nor were the motions at all slimy. *Symptoms continued exactly the same.* It could not then be doubted that the head was primarily affected, and that if the disease were not speedily arrested, effusion would take place.

*Utatur capiti raso Unguento Antim. Tartar. ter die. Samat Hydrarg. Submur. gr. ij.; Jalap. Pulv. gr. viij. Prore and. — Full diet.**

The ointment was not begun till the 24th. It was diligently used; and in a few days, when the discharge from the pustules had become very profuse, there was marked relief of all the symptoms. The smarting of the scalp was troublesome, and fomentations and poultices were ordered. Purgative to be repeated.

April 5th.—The boy continued much better. Pupils contracted freely to light, but the pain of his head was not entirely gone. The discharge from the pustules was still profuse.—*Admov. utriusq. temp. hirudines iij.*

9th.—Leeches have been of service. Discharge continues, but in a less degree. Pain of the head is nearly gone. Pupils contract freely to the light. Eyelids no longer drop. Countenance cheerful, and torpor quite removed. Pulse natural. Tongue clean. Bowels regular, and motions of healthy appearance.—*Repet. hirudines.*

19th.—He was discharged cured.

The good effects of the tartar emetic ointment in this case were unequivocal. The alteration in his appearance, as soon as it took effect, was most striking.

No. III. *Case of severe Pain of the Head, much resembling Neuralgia Faciei.*

— Jeffery, ætatis thirty-three, married woman, was made out-patient August 9th, 1822. She complained of ex-

* In cases like the one above recorded, where there is great general debility, and at the same time local congestion, the most rational indications would appear to be, first, to relieve the oppressed organ, and then, secondly, to support the system, that the recurrence of congestion may be prevented. In no cases, perhaps, is this plan of treatment more called for than in those where the congestion exists in the brain, especially when the subjects are young and of feeble constitution.

cessive pain of the left side of her head, which had tormented her at intervals for some weeks. I discovered, upon further inquiry, that there was an abscess of the left ear, which doubtless aggravated the disorder, but which did not seem to be the sole cause of it; for although, whenever the abscess burst, and discharged its contents, which it frequently did, there was a mitigation of suffering, still the pain did not cease at these times, but recurred in paroxysms, darting and shooting, and almost depriving the poor woman of her senses at the moment. There was great nervous debility about the patient: she was feeble, with a weak pulse, and complained of sinking at stomach. Her tongue was coated. Bowels were regular. I first of all prescribed bark with myrrh, and equal parts of pil. aloes c. and pil. gall. c. pro re natâ, also an opium pill to be taken when the pain should be violent,

After continuing this plan for some time, without any advantage, the subcarb. ferri was tried, but with no better success. A seton was afterwards made in her neck, and kept discharging for upwards of two months. It was then taken out, having done no good.

January 3d.—The bark was resumed; leeches were applied to the left temple; and the following pills were ordered every eight hours:—

R Extract. Stram. gr. ss.; Opii, gr. ss.; Hyocy. gr. iij.; Humuli, gr. v.; Pulv. Jacobi (veri), gr. iij.; Pulv. Myrrhæ, q. s. ut ft. pil. iij. vel iv.

17th.—I did not perceive that any improvement had taken place in the patient. I now determined to give the iron a farther trial, and accordingly prescribed as follows:—

R Ferri Carb. 3ss.; Pulv. Calumb. gr. v.; Misce, fiat pulvis, ter die sumend. — Sumat Mist. Camph. ʒj. cum Liq. Ammon. Acet. ʒiij.; Tinct. Opii, mxxv.; Syr. s. ʒj. Omni nocte.

March 7th.—Her general health was improved. The powders had agreed, but they now rather oppressed the stomach. They were, however, continued till the 28th, when they were changed for the following:—

R Ferri Subcarb. 3iss.; Pulv. Rhei, 3ss.; Olei Ment. Pip. gʳ. viij.; Confect. Rosæ Can. q. s. ut fiant pil. xxx. quarum sumat iij. bis die, cum parte sextâ misturæ sequentis.

R Decoct. Cinch. ʒviss.; Tinct. ejusd. c. 3ss.; Confect. Aromat. 3ss.; Sp. Lav. c. ʒvj. Fiat mistura.

This plan was steadily pursued for full two months. The patient gradually improved in health, and lost the pain. On the 13th June she was discharged as cured, and I have not heard of her to this date, August 20th.

That this poor woman will not be visited by the same

complaint again, I feel by no means disposed to say. From what I have remarked, indeed, in similar cases, I should think it more than probable that it will recur. Still the subcarbonate of iron has removed it for the present; and this case may fairly be added to many more of a like description, in which that substance has been of undoubted efficacy.

No. IV. *Case of General Dropsy, arising from extensive Ossification in the Heart, and Adhesion of the Pericardium to the Viscus.*

Upon the death of my late colleague, Dr. Packe, which took place in March, the care of his patients in the hospital devolved upon me, until the election of a Physician to supply his place. Among other cases, I found one of general dropsy. The individual, whose name was Austen Upton, ætatis thirty-seven, was moribund when I saw him first, viz. March 14th, and he died two days after.

I obtained the following statement of symptoms from one of the pupils: — "The man was admitted with general dropsy. He complained of difficulty of breathing, accompanied by a sense of weight and oppression at the chest, inability to rest on either side, or indeed in any position, unless his head and shoulders were considerably raised. His countenance was much tinged with bile, and expressive of anxiety. His pulse was weak and irregular. Tongue was loaded with a brown fur. Bowels confined, and what fæces were passed were not natural. His skin was dry. Little urine secreted, and that little was of a deep orange colour. On the 12th March his legs were scarified, and a great quantity of fluid escaped. Two days after, the punctures assumed an unhealthy appearance; the legs became much inflamed, particularly the right one, which sphacelated."

Dissection. — The body was examined on the 18th, and the appearances were as follow: — Upon opening the thorax, which contained a large quantity of yellow fluid, the lungs, particularly on the left side, were found adhering, by strong filamentous bands, to the pleura costalis, and they exhibited a slight blush of inflammation. The heart was inseparably attached throughout the whole of its surface to the pericardium. The semilunar, mitral, and tricuspid valves were ossified, as were also the coronary arteries. Coagula of blood were found in the ventricles, and in various parts of the substance of the heart marks of incipient ossification were discernible.

In the abdomen, the liver was rather larger, and more hard than natural. The villous coat of the duodenum was

very vascular. There seemed to be some obstruction of the gall ducts. No other morbid appearance was detected.

The brain was free from disease.

It is rarely, I think, that adhesions so strong and so complete are found between the pleura which covers the lungs and that which lines the ribs, or between the pericardium and heart. Still more rarely do we meet with ossification of the heart to so great an extent as had taken place in the instance before us. Dr. Baillie, in his well-known work, informs us, that "a portion of the heart has been observed to be converted into bone, and that earthy matter has also been found deposited in the muscular substance of the heart;" but he adds, that "neither of these appearances have come under his own observation, and that they are to be looked upon as very uncommon."* Morgagni notices a case from Platerus, of a merchant in whom "the right ventricle was internally so hard, every where rough, and in some measure scaly, that the hand being thrust into it, was hurt by the roughness of the scales."† He then proceeds to relate a dissection which he made in 1745, where bony matter was found in the heart. Baron Corvisart mentions one case of this kind, which had fallen under his own observation, and which it would seem was the only one he had met with. The case he certainly deemed an extraordinary one, for he brings forward two others in support of it: the one by Haller, the other by M. Renaudin.‡

Upon the whole, the foregoing case of Upton must be looked upon as one of no common interest.

In the short history of the above case, furnished by Mr. Peter, one of the pupils of the hospital, it is mentioned, that towards the close of the disease the lower extremities were punctured, and that the punctured places assumed, in two days, an unhealthy appearance, became much inflamed, and that ultimately the right leg became gangrenous. Here is one instance, among many which have fallen under my observation, of irremediable mischief arising from scarifications of the lower extremities in cases of dropsy. All that I have ever witnessed of this practice, from the time that I first became a student in physic, has tended to impress more and more upon my mind the conviction that it is always hazardous practice; and I consider it to be more especially dangerous, where the dropsical

* Baillie, *Morbid Anatomy*, page 45.

† Morgagni. *Ep.* XXVII. Art. 16.

‡ Corvisart. *Treatise on the Diseases and Organic Lesions of the Heart, &c.* — Chap. IV. sect. 2.

affection is thought to depend upon some disease of the heart; for in these cases I am inclined to think, though a writer of high authority seems to question the fact,* that the extremities are peculiarly liable to mortification. For my own part, whenever I wish to evacuate the fluid from dropsical limbs, I shall employ acupunctura, which I have found in several instances safe and effectual. The punctures made by the needles are so small, that there is little danger of their running into crysipelatous inflammation, while they are quite sufficient to allow of the escape of the effused fluid. Several needles may be passed into each leg, and the result will doubtless be satisfactory. As much relief will be afforded as by scarification, and the risk attending the latter operation will be avoided.

No. V. Case of Chronic Rheumatism, followed by an Epileptic Seizure, which terminated fatally.

Sarah Hall, ætatis 37, was admitted into the hospital, February 14th, with chronic rheumatism. No other disease was hinted at by the patient or her friends, and no other was apparent to me. For several days she seemed to be improving, under the use of the warm bath, bark and colchicum, and Dover's powder at bed-time. On the 19th, however, in the afternoon, she fell down in a fit, from which she could not be recovered.

It has since been discovered that the poor woman was subject to epilepsy.†

Dissection. — The body was examined about sixteen hours after death. It was still somewhat warm, notwithstanding the length of time which had elapsed since the patient expired. Externally it had several patches of a purple hue, and upon being cut into, the cellular substance was found to contain a considerable quantity of a peculiar fluid resembling oil. The omentum, mesentery, intestines, were loaded with fat.

The liver and spleen were enlarged, and in their texture soft and pulpy. The bladder was full of urine, but it was not diseased. The uterus and its appendages were healthy.

The heart was pale and flaccid. Lungs free from disease.

On removing the calvarium, which was unusually thick,

* Corvisart, chap. IV. sect. 3, ad finem. "We may conclude, from these cases, that sphacelus of the extremities is not a frequent consequence of diseases of the heart or great vessels."

† In this case, as has happened in many others, the want of professional information as to the patient's state, previously to her being sent to the hospital, was to be regretted.

there was observed a peculiar groove or depression, extending throughout the whole length of the coronal suture. The furrows produced by the arteries were very conspicuous: the dura mater seemed rather more vascular than usual; and when it was removed, the vessels of the pia mater, towards the anterior portion, as far back as the situation of the coronal suture, were of a livid hue, while those of the posterior part of that membrane were of a purple colour. Upon cutting down to the lateral ventricles, a considerably larger quantity of fluid than they naturally contain escaped. The substance of the brain appeared to be perfectly healthy.

No. VI. *Case of Hydrothorax.*

John Maxted, ætatis 59, was admitted May 23d, labouring under symptoms of hydrothorax. He stated that he first felt himself decidedly ill soon after Michaelmas, 1822—that he became a patient of the hospital, January 10th, and after remaining there a month, was discharged, much relieved. He, however, got wet in returning home, and all the symptoms quickly returned. The symptoms upon his second admission were—much cough and expectoration of viscid mucus. The cough created pain at the scrobiculus cordis. He was unable to lie down in bed, or to use any exertion without great distress. His pulse was extremely feeble, irregular, and intermitting. Tongue moist, but covered with fur. Much thirst. Little appetite. His urine was scanty and high coloured, and occasionally turbid. No perspiration. Bowels relaxed, and motions of natural colour. Lower extremities considerably swelled. Countenance livid. Sleep much disturbed by frightful dreams.

R Pulv. Scillæ gr. ij.; Pulv. Digit. gr. ss.; Pil. Hydrarg. gr. j.;
Confect. Rosæ gr. j. ut ft. Pil. ter die sumend. cum parte
sexta mist. sequent.
R Sup. Armorac. c. ʒv.; Sp. Æth. Nitr. ʒss.; Vini Colch. 3ij.;
Sp. Junip. c. ʒij. F. M.
Utatur pectori unguent. Ant. Tartar.

In this manner he proceeded till June 3d, when, in addition to the above medicines, a drachm of the stronger mercurial ointment was directed to be rubbed in on the right side every night. The ungt. ant. tart. was discontinued.

June 8th.—Pulse regular and not intermitting. Tongue cleaner. Swelling of legs diminished. His bowels are

very much relaxed.—Sumat pil. bis die, cum coch. ij. misturæ.

R Mist. Camph. ft. 3xj.; Extract. Hyoscy. gr. jv.; Tinct. Camph. c. f. 3j. Misce, ft. haustus, omni nocte sumend.

16th.—By this time all the symptoms were materially relieved. The cough and expectoration were less; the respiration was more free. He could lie down in bed without difficulty, and his rest was less disturbed than it had formerly been. His pulse, about 80 in the minute, was not intermitting, though still somewhat irregular. His tongue was clean. Bowels relaxed. Urine clear and increased in quantity. The swelling of legs was almost entirely gone.

24th.—He continued much in the same state, excepting that he complained of a degree of faintness and of nausea. The digitalis was, therefore, discontinued for a few days. The patient remained in the hospital until July 8th, when he was discharged, as having received great benefit.

There is nothing singular or extraordinary in the above case. It is one, I may say, of almost every-day occurrence. I have, however, recorded it, because the plan of treatment seemed decidedly successful; and I wish to recommend it as one which I have found equally so in several cases similar to that before us.

In dropsy of the chest it is considered that diuretic medicines are more useful than they are in any other species of dropsy. When exhibited by themselves, however, I have seldom, if ever, seen much advantage from them; nor is this to be wondered at, since hydrothorax and hydro-pericardium are but symptoms of disease of thoracic or abdominal viscera. Generally, where there exist symptoms which lead us to infer that there is water in the chest, we recognise also some disease of liver, or spleen, or both, which demands the appropriate remedies. Generally too we meet with extreme debility of stomach, and such an universal failure of the powers of life, when the disease has subsisted for some time, that stimulants cannot be dispensed with. To meet then every indication, a combination of various remedies is needed, and a combination, either the same as that which was adopted in the present instance, or similar to it, I have found eminently useful. I have lying before me several cases, in which marked relief was obtained. Of one of these I shall offer an abstract, as I consider it, on several accounts, an interesting one.

No. VII. *Case of Hydrothorax.*

John Lewin, gardener, was admitted into the hospital, April 22d, 1821, with the following symptoms:—Great tremor and debility. Pulse feeble, and intermitting, and irregular. Respiration extremely anxious, especially upon the least exertion. Cough. Violent palpitation of heart. Tongue foul and dry. Urine high-coloured, but in sufficient quantity. Bowels regular, but evacuations clay-coloured. Cannot lie down in bed, and his sleep is much disturbed. Lower extremities anasarcaous. It appears that the patient has lived rather freely. For a week he took inf. armorac. c. with vinum colch., and a blister was applied to his chest; but he did not improve. On the 29th he was admitted into the house.

R Pulv. Scillæ gr. iij; Hydrarg. Submur. gr. j.; Pulv. Digital. gr. ss.; Confect. Rosæ Can. q. s. ut fiat pil. ter die sumend. Superbibendo misturæ sequentis coch. iij. larg.

R Inf. Armorac. c. 3v.; Sp. Æth. Nitr. 3vj.; Vini Colch. 3ss.; Sp. Junip. c. 3jss. F. M.

May 2d.—Much relieved. Breathing easy. Swelling of legs gone. Pulse much less irregular. Tongue clearer. Urine and alvine discharge as before. Little sleep.

7th.—Respiration much improved. No cough. He is now able to walk quick, or to ascend a hill without much difficulty. Pulse still irregular and weak. Bowels as before. Appetite very good. He feels so much better that he wishes to be made out-patient. He left the hospital accordingly on the 11th.

18th.—Much the same in every respect. Complained of want of rest, and was therefore ordered acid. prussici mij. ex aq. rosæ 3x. omni nocte, horâ somni, et repet. horis quatuor interpositis, si opus fuerit.

June 1st.—Going on as well as I could expect.

July.—A strong pulsation, just below the scrobiculus cordis, which had been remarked when the man first applied for admission into the hospital, has now become more violent. The pills with digitalis have been relinquished for between a fortnight and three weeks, and he has been taking infus. rosæ with tinct. digital.

July 13th.—He returned to the pills, and discontinued all other medicine. He was soon after discharged, as having received benefit. He was, however, allowed to have pills from the hospital.

Sept. 9th.—Continues pretty well, and able to follow his occupation.

March, 1822.—As before. He still takes a grain or a grain and a half of digitalis occasionally, and with great

relief to his chest. A short time numbness and coldness of hands, was ascribe to the medicine. These things soon, however, went off.

This man continued in tolerable health, till June, 1823, when I was removed to his own habitation, as he had fallen expected he had been making too free of medicine, and such I found to be the case; however, had a fit; but feeling giddy, his work, he had lain down upon the floor, spoken to by those who passed by, he seemed like one intoxicated. I collected, and free from all pain; but forgotten words that he could give me. I gave him a slate, and he attempted to write down the pencil, intimating, by his manner, not recollect words to express what I asked him, whether he attributed his illness to pills, he said — "Yes, yes." I ordered a blister, to be repeated in two or three days, and applied a blister to his chest. He was relieved, till two very soundly. His bowels were relieved. The evacuations were extremely offensive. He had, by himself so far as to be able to give me a manner in which he was attacked, and he was nearly as well as usual. It was taken a pill, containing a grain of digitalis, and had repeated it the next morning, as the previous dose had caused considerable confusion of head. He now relinquished his work, and as he complained of great pain at the pit of the stomach, a drachm of opium was rubbed in every night, as directed in the mixture originally prescribed, taking the following pills:

R Pil. Hydrarg. g. iij.; Pulv. Scillæ gr. ij. M. ft. pil. ij.

At present, Sept. 3d, he is very well, taking pills only.

Canterbury, 13th October, 1823.

[We much regret that our limits, and the time received this interesting report, oblige us to omit a number of the valuable cases which we have collected. Number.]

X.

Case of Trismus, &c. approaching to Tetanus, supervening to a lacerated Wound, successfully treated by Acupuncture.
By FREDERICK FINCH, Esq. Greenwich, Member of the Royal College of Surgeons, London.

[In a Letter to Dr. COPLAND.]

IN a paper on the Efficacy of Acupuncture in Anasarca, which you did me the favour to insert in your valuable publication a few months since, I ventured to suggest the probability of that operation being attended with advantage if resorted to in other diseases.

The frequent opportunities I have had of witnessing the manifest benefit it has afforded in rheumatic patients, by producing almost instantaneous relief, particularly in those cases where there was rigidity of the muscles, induced me to entertain an opinion that acupuncture might be efficacious in the alleviation of tetanus, and I determined to avail myself of the first opportunity to make trial of it in that disease.

In the course of the last month, a highly respectable neighbouring Practitioner (Mr. Bromley, of Deptford,) informed me that he was attending a patient who had fallen from a considerable height, and had received several extensive lacerated wounds on various parts of the body and scalp, and that he despaired of his recovery, in consequence of trismus, &c. having taken place, and destroyed all power of deglutition. I intimated to Mr. Bromley that, if the case were mine, I should try the effect of acupuncture, and was permitted to accompany him to the patient's house. The patient was in a most distressing situation, with a pulse of 150; the jaw completely locked; and, from the extreme rigidity of the muscles about the throat, he was incapable of swallowing the smallest quantity of fluid.

Having obtained permission to employ the needles, I introduced one into the masseter muscle of the right side, and was much gratified to find that muscle, as well as the sternocleido-mastoideus, platysma myoides, and all the muscles of the neck and throat of that side, instantaneously relieved from their spasmodic contraction. Another needle was then introduced into the left masseter, and relief (though not to the same extent) was immediately afforded. Such was the effect of the operation, that before we left the room the patient took a large dose of tinct. opii and a cup of chocolate,

although he had been unable to swallow any thing for some considerable time before. He is now perfectly recovered.

It would be too much to assert that the same means would in every case be attended with the same fortunate effects; but in such a dangerous and fatal malady, even a distant approach to a successful remedy may lead to important discoveries, which may be promoted by inserting this case in the pages of the REPOSITORY.

Greenwich, 14th October, 1823.

XI.

Critical Remarks on the London Pharmacopœia of 1809, and the altered Edition of 1815; with Suggestions intended to obviate the Objections made against attending to the Directions contained in the "Pharmacopœia Collegii Regalis Medicorum Londinensis;" submitted to the consideration of that Learned Body, and the Medical Profession in general.
By J. H. SPRAGUE, Esq. Member of the Royal College of Surgeons, London, and of the Medico-Anatomical Society of Bristol, &c.

WITHOUT a formal introduction, I shall proceed to call the attention of the readers of the MEDICAL REPOSITORY to the following observations on the several imperfections and errors which must be acknowledged as appertaining to the present Pharmacopœia of the Royal College of Physicians of London. I do this with much less hesitation than I otherwise should, as my remarks are not founded on my own experience and opinion only, but on the experience and opinions also of some of the most enlightened contemporary writers in therapeutics and pharmacology. Many of these errors and omissions have been acknowledged by some of the fellows of the College, who, I understand, form a part of the committee engaged in revising the present Pharmacopœia, as preliminary to the publication of a new edition of that work. Now, after the very just criticism which has been bestowed upon the subject by many competent judges, whose opinions are well known to the Profession as deserving the strictest attention, it would be highly discreditable to the College again to issue a work of so much importance to the community under their sanction, without having profited by every suggestion, of however humble a nature it may be, that has a tendency to correct the errors and omissions in question. My endeavours, in the present instance, in whatever manner they may be

viewed, are to be useful — this obtained, I am indifferent to the rest.

In the first place, I would briefly call the attention of the reader to the propriety there would be in the College taking into their consideration the observations made by Mr. Gray, in his "Elements of Pharmacy," on the present weights used by the Apothecary, &c. He remarks, "When the London College of Physicians published, in 1618, their first Pharmacopœia, Sir Theodore Turquet de la Mayerne, who compiled the work, being a French Physician, unacquainted, as it should seem, with the usage of England, and not aware or regardless of the practical inconvenience of Apothecaries buying and selling by one weight, and making up their articles by another, ordered them to dispense their medicines by the troy weight, instead of the avoirdupois, by which they buy and sell, and which had been previously used in dispensing. In order to avoid the expense of both piles, or the trouble of calculating how many oz. of one pile are equal to so many of the other, a strange mixture of the two are used. When medicines are ordered in quantities less than a quarter of an ounce, it is presumed that they are powerful in their action, and they weigh them by the troy weight; but those ordered in a large proportion, being thought to be weak, or intended to be divided into numerous doses, the Apothecaries presume that the difference between the two weights will not be of any consequence, and weigh them by the avoirdupois, which they are obliged to keep for their retail business as low as the gr. oz. Thus a trade in which the utmost precision in weights is usually expected, is actually that which is the most inaccurate in that respect; but the patients have no means of checking errors in dispensing. Some few Apothecaries and other dispensers have troy weights as far as four or eight oz., but scarce any have them heavier. The Physicians who, from want of an academical education, or any other cause, practise their profession under the mask of being Apothecaries, that is to say, mere sellers of medicine, are at least as inaccurate; and many of them exhibit their medicines by the eye alone, without weighing. Dr. Powell, in his translation of the last Pharmacopœia, has desired, in a half-official manner, that no avoirdupois weights should be kept in an Apothecary's shop; but that, like the gold and silver smiths, they should buy and sell, as well as dispense, by the troy weight. He does not consider that gold and silver are articles bought and sold by that weight, whatever may be the quantity; whereas the medicines of the Apothecary are, in general, only a specific appropriation of articles far more commonly used for other purposes: hence he must buy them

by the usual commercial weight; and to forbid him the keeping of that pile in his shop, would deprive him of the power of checking the weight of the drugs sent in by his druggist, who, in the event of any dispute, would not rely on the reduction that might be made by the Apothecary of one weight into another. On the other hand, to oblige him to sell by a weight the ounce of which is much heavier than the common, would necessitate the asking of a higher price by ten per cent. than the druggist, or a diminution of the profit to the same amount. All this confusion and inaccuracy has arisen from the national vanity of Sir Theodore Mayerne, which led him to suppose that the weight of Troyes in Champagne must be superior to that of the *barbarians* of England; and his ignorance, that those English weights that he despised, were the very weights used by the Greeks and Romans in composing those prescriptions that he selected. The only method to get rid of this confusion would be for the College to disclaim this absurd introduction of the French weight, to return to the national weight, and thus restore the use of its small divisions."

At all events, nothing should be regulated by the troy weight beyond two drams, which is always included in the small box of weights sold to Apothecaries; and all above that quantity may, with much propriety and convenience, be directed to be weighed by avoirdupois. This would at once do away with the perplexity now experienced in the calculation and subdivision of the weights, and prevent the inaccuracies which are continually occurring by men who are disposed to attend to their own interest, and disregard every thing that *they* deem calculated to give them unnecessary trouble. — For further interesting particulars respecting weights, I would beg leave to refer to Gray's *Elements of Pharmacy*, pp. 3—16.

I shall now proceed to refer to some of the various articles and preparations of the London Pharmacopœia, in the order in which they are placed before us in the work itself; offering such humble suggestions respecting them, and such additions, as, I trust, will be found calculated to be applied to a practical and beneficial purpose.

Following the course thus laid down, some of the articles of the materia medica will now very briefly engage my attention.

It must be allowed that every article introduced into the materia medica is supposed to be of some utility in the practice of medicine; and, therefore, should have an official preparation assigned it: with this view, I would refer to a few established formulæ, which, whether the College could

scend to avail themselves of them or not, will be of essential service to junior Practitioners to become acquainted with, as several of them are known to be efficient remedies, and are combined according to the most scientific rules of pharmaceutical composition.

The principal articles above alluded to, included at present in the *materia medica* of the London Pharmacopœia, requiring official formulæ, are the following :

MATERIA MEDICA.

<i>Mat. Med.</i>		<i>Præparat.</i>
Althææ Radix	-	Decoctum Althææ.
Ammoniæ Murias	-	Emplastrum Ammoniæ.
Asari Folia	-	Pulv. Asari Compositus.
Assafœtidæ Gummi Resina	-	{ Pil. Assafœtidæ cum Cinchona. { Enema Assafœtidæ.
Balsamum Peruvianum	-	Mistura Balsami Peruviani.
Balsamum Tolutanum	-	Mistura Balsami Tolutani.
Belladonnæ Folia	-	{ Tinctura Belladonnæ. { Unguentum Belladonnæ.
Calami Radix	-	Infusus Calami. Tinctura Calami.
Cardamomi Semina*	-	-
Castoreum	-	Tinctura Castorei Ammoniata.
Catechu Extractum	-	{ Pulv. Kino Compositus. { Troch. Catechu Extracti.
Centaurii Cacumina	-	Tinctura Centaurii Cacuminum.
Cinchonæ Cortex	-	Sulphas Quininæ.†
Colchici Radix	-	Vinum Colchici. (Dr. Marcet's.)
Conii Folia	-	{ Tinctura Conii; et Mistura Co- { nii Compos.
Contrajervæ Radix	-	Infusus Serpentariz Compositus.
Copaiba	-	Mistura Copaibæ.
Coriandri Semina	-	Infusus Sennæ.
Creta	-	Pulv. Cretaceus.
Elaterii Poma	-	Mass. Pil. Elaterii.
Ferrum	-	{ Solutio Ferri Oxygenata. Dr. { Beddoes's.
Gallæ	-	{ Decoctum Gallæ; Tinctura Gal- { læ; et Unguentum Gallæ Opi- { tum.
Glycyrrhizæ Radix	-	Decoctum Glycyrrhizæ.
Granati Cortex	-	Decoctum Granati.
Guaiaci Resina et Lignum	-	{ Decoctum Guaiaci. Mistura { Guaiaci Ammoniata.

* Matonia Cardamomum.

† A paper of Dr. Elliottson's on its properties, just published in the "*Medico-Chirurgical Transactions*," Vol. XII. p. 543, will be referred to, when we come to speak of its virtues in the proper place.

<i>Mat. Med.</i>	<i>Præparat.</i>
Hydrargyrum -	{ Hydrargyri Cyanit.
Jalapæ Radix -	{ Hydrargyri Phosphas.
Ipecacuanhæ Radix -	Pulv. Jalapæ Compositus.
	{ Tinctura Ipecacuanhæ. Pulv.
	{ Ipecac. cum Antimonio; et
	{ Troch. Ipecac.
Juniperi Baccæ -	Infusus Juniperi.
Kino -	
Marrubium -	Infusus Marrubii.
Mentha Viridis -	{ Infusus Menthæ Compositus;
	{ Confectio Menthæ Viridis.
Menyanthes -	Infusus Menyanthis.
Myrrha -	Mistura Myrrhæ.
Olibanum -	Mistura Olibani.
Opium -	Acetas Morphæ.
Ova -	Mistura Vinosa.
Potassæ Nitras -	Troch. Potass. Nitrat.
Pyrethri Radix -	Tinctura Pyrethri.
Rhei Radix -	Mistura Rhei Composita.
Scammonæ Gummi Resina -	{ Pulv. Scammonæ cum Calomelane, vel Basilicus.
Sarsaparilla Radix -	Infusus Sarsaparillæ. †
Serpentariæ Radix -	{ Infusus Serpentariz Compositus.
Spartii Cacumina -	Decoctum Spartii Cacuminum.
Spigellæ Radix -	Infusus Spigellæ.
Spongia -	Troch. Spongiæ.
Tabaci Folia -	Tinctura Tabaci (Noble's).
Taraxici Radix -	Decoctum Taraxici.
Tormentillæ Radix -	Decoctum Tormentillæ.
Valerianæ Radix -	Oleum Valerianæ Essentiale.
Uvæ Ursi Folia -	Infusus Uvæ Ursi.
Zincum -	{ Solutio Zinci Acetatis. Troch.
	{ Zinci Sulphatis.
Zingiberis Radix -	Infusus Zingiberis.

Pterocarpus Erinacea.

† An excellent paper on the different kinds of Sarsaparilla, by Mr. John Pope, will be found in the "Medico-Chirurgical Transactions," Vol. XII. p. 344, which will hereafter be more particularly referred to.

APPENDIX TO THE MATERIA MEDICA :

Consisting of medical substances not yet admitted into the LONDON PHARMACOPŒIA, but which are certainly entitled to a place in the next Edition, as there is sufficiently respectable testimony upon record to lead us to believe that they have been administered by different Practitioners with the most beneficial effects.

Artemisia Santonica, Worm-seed. — A strong decoction of worm-seed as an enema is particularly recommended by Mr. C. M. Clark, in his first volume on female diseases, as one of the best remedies that can be employed to destroy ascarides. I have frequently tried it myself, and can bear ample testimony to the correctness of Mr. Clark's opinion. The peasantry of South Wales give the worm-seed coarsely bruised, and mixed with honey, in the form of an electuary, as a common domestic medicine against worms, which is said to prove the most effectual remedy. Vide Decoctum Santonici.

Berberis Cortex, Inner Bark of the Barberry. — Dr. William Hutchinson (late editor of the Medical and Physical Journal) informed me, that he had found an infusion of this bark particularly serviceable as an aperient in jaundice; and since his recommendation, I have also experienced from its use the most decided advantage in icterus, and other disordered states of the chylopoietic viscera, attended with a paucity of bile in the intestinal canal. Vide Infusum Berberis.

Cubebs, Cubebs, or Java Pepper. — Mr. Jeffreys has lately written "Practical Observations on the Use of Cubebs in the Cure of Gonorrhœa." Many other Practitioners maintain a favourable opinion of its influence in the same disease. Dr. Macleod and Mr. Bacot (the present editors of the London Medical and Physical Journal) speak of it as "a very valuable medicine," and give the result of a correspondent's experience at Wolverhampton, which is altogether highly in favour of the remedy. It is observed, that "the pepper is rendered nearly inert, by remaining long in a powdered state, probably by the evaporation of its volatile oil. Vide London Medical and Physical Journal for October, 1822, p. 357. This remark may account for its failure in some cases, and would seem to indicate the propriety of always giving it in the form of a tincture, which contains all its active qualities *unimpaired by keeping*. I have generally found cubebs speedily efficacious in gonorrhœa, when it was given early in the disease, and before the use of other remedies. It has also been found efficacious in leucorrhœa and in diarrhœa. Does it not, therefore, deserve to be restored to the list of the Materia Medica? — for it once had a place there. Vide Tincturam Cubebæ.

Datura Stramonii, Thorn Apple. — Dr. Paris observes, in the Pharmacologia, Vol. II. p. 174, "It is narcotic, and has been regarded by many authors as eminently antispasmodic. Dr. Barton, an American physician, made very extensive trials of its efficacy, the result of which is highly favourable to its use; and I have been recently informed, by Sir Henry Hallford, that he has found a tincture made of the seeds a very efficient and unobjectionable preparation." Surely, after such assertions, it must gain admission into the

next edition of the Pharmacopœia. — Vide *Tincturam Stramonii* and *Extractum Stramonii*.

Iodina, Iodine. — Iodine is a simple body, discovered in 1813, by M. Courtois, in the mother waters of soda, as it is obtained from the sea-weed. The name of iodine is derived from the Greek word *ἰωδης*, on account of the blue colour of its vapour. Dr. Elliotson remarks, "Of the powers of iodine in bronchocele we have abundant testimony; I have seen sufficient to satisfy myself; and they would seem equally great in other structural diseases." Dr. Baron's experience of its efficacy is equally encouraging. — Vide *Tincturam Iodinæ*.

Iridis Flor. Radix, Orris Root. — Every person who is practically acquainted with the pharmaceutical composition of pill masses, will, I doubt not, agree with me, that orris root ought to have a place in the Pharmacopœia, for the very great use of its powder in rendering various pill masses, into which soft extracts enter, of a proper consistence, and retaining them so. It is also one of the best substances for involving pills of calomel and other mercurial preparations. Liquorice, nor any other powder, will answer the purpose so well, as a trial will prove the correctness of.

Lactuca Sativa, Cos Lettuce, Inspissated Juice. — Dr. Paris, in *Pharmacologia*, Vol. II. p. 209, remarks, "This preparation has not yet found its way into the London Pharmacopœia; but as considerable interest has been excited with regard to its sedative properties, by the testimony of Dr. Duncan and others, I may be allowed to introduce it in the present work." This remark, I should suppose, may be considered as precursory to its appearance in the next edition of the London Pharmacopœia. Prepared according to Mr. Probart's method, see *Extractum Lactucæ Concentratum*. (Probart's) *Tinctum Lactucæ*, and *Troch. Lactucæ*.

Rhodium Lignum, Rose Wood. — See Dr. Mason Good's observations on its virtues, in his *Study of Medicine*, Vol. I. p. 136, where he speaks of it as a valuable remedy in flatulency, not only affording benefit for the time, but, by its tonic virtue, having a tendency to correct the disorder radically, which certainly renders it deserving of a place in the New London Pharmacopœia. For further remarks on its use, see *Tinctura Rhodii*.

Tigilium Croton (Oleum & Seminibus expressum). — For its history and effects as a cathartic, I must beg leave to refer the reader to Dr. Paris's remarks, which he will find in the *Pharmacologia*, vol. II. pp. 418 — 423, and to various papers in the *MEDICAL REPOSITORY*.

Having now comprised all the articles and preparations of the *Materia Medica*, to which I wish to call the attention of the Profession, I shall next endeavour to obviate any unfounded objection that may be made against multiplying our official formulæ.

In my humble opinion, a Pharmacopœia inclusive of the *Materia Medica* ought to constitute a standard work of reference, giving precise and scientific directions for the

accurate composition of every chemical preparation, and of those more particularly denominated pharmaceutical. It also should comprise the recipes for other approved medicines, under the classification of *extemporaneous formulæ*. By such an arrangement, all the preparations would, with much propriety, be comprised under two principal divisions, viz. officinal preparations and extemporaneous formulæ. The first should always be kept prepared in the shop of the Apothecary, for the purpose of forming the latter. The admission of extemporaneous compositions into the Pharmacopœia has been already anticipated; for the *decoctions, infusions, mixtures*—several of the *liniments, mucilages*—some of the *ointments, pills, plasters, &c.* must be regarded as extemporaneous.

When it is considered how many are incompetent to prescribe with elegance and effect, surely the Pharmacopœia should be referred to as a guide to direct the Practitioner to the most efficient extemporaneous formulæ or compositions. This would much abridge the labour of the Physician in prescribing, as the work would contain some of the best remedies against disease, in the most useful state of combination. Keeping these principles in view, the extemporaneous formulæ of the College, I think, may be augmented with much usefulness and propriety.

The Officinal Preparations and Compositions come first in order. They are as follows:—

ACIDUM ACETICUM.

On account of the diluted state of the acid, this preparation should be named *acidum aceticum dilutum*, to correspond with the nomenclature of *acidum nitricum dilutum* and *acidum sulphuricum dilutum*. Nothing can be more improper than the name given to it by the London College, as vinegar varies so much in strength. The College would act very judiciously in directing it to be prepared with the concentrated acetic acid, similar to a preparation manufactured by Beaufoy and Co., so much praised by Dr. Paris; and which is ordered by the makers to be diluted with distilled water, as in the subjoined formula. I have not an acetometer at hand to ascertain the relative strength of the acid, and therefore can only allude to the proportions directed by those persons, who at present exclusively monopolize by secrecy the manufacture of the article.

Acidum Aceticum Dilutum.

R Acidi Acetici Concentrat. Oj.
Aque Distillatæ, Oviij. Misc.

The above proportion of acid to the water makes diluted acetic acid of the same standard strength as the distilled vinegar of the London Pharmacopœia, and forms an unique preparation, answering all the purposes for which it is required.

I shall treat of several other acids and other preparations, which are deserving a place in the Pharmacopœia, in an Appendix to those sanctioned by the College.

ALKALIES AND NEUTRAL SALTS.

"The title of this section in the London Pharmacopœia is *Alkalies and their Salts*; but as these salts cannot be termed salts of alkalies in strict language, it would be preferable to translate the phrase neutral salts."

Liquor Ammonia.—The preferable process of procuring the liquor ammoniæ is that recommended by Mr. Phillips, and is as follows:—To ℥viij. of muriate of ammonia, and an equal quantity of newly-burnt lime, add four pints of boiling water; allow the mixture to cool in a well-closed vessel, and from the strained and clear solution distil off eight ounces of the liquor ammoniæ.

Liquor Ammonia Acetatis.

R Ammonia Subcarbonatis, ℥j.

Acidi Acetici Diluti, Oij. vel q. s. ad Ammoniam acetatè saturandam.

Misce secundùm artem.

Thus prepared, the liquor of the acetate of ammoniæ forms a very superior article to what is commonly found in the shops.

EARTHS AND THEIR SALTS.

Calcis Murias.—That eminent Professor of Chemistry to the University of Oxford, the late Dr. Thomas Beddoes, of Clifton, was very dissatisfied with the preparation of the muriate of lime ordered by the London College; and therefore, for many years before his decease, he directed it to be prepared in his own practice according to the following simple and excellent method, which completely supersedes the complicated formula of the present Pharmacopœia:—

Liquor Calcis Muriatis.—(Dr. Beddoes's.)

R Acidi Muriatici,

Aquæ Distillatæ, āā ℥iv.

Marmoris Albi Pulv. q. s. ad saturandum.

Many doubts have been expressed respecting the use of this medicine in scrofula, but I have witnessed the administration of it by Dr. B. in such cases with evident advantage. That excellent Surgeon, the late Mr. Baynton, of Bristol,

also corroborates this statement in his work on Diseases of the Spine. I can also attest, from my own experience, that it deserves not to be disregarded. The solution should be kept closely confined in bottles with glass stoppers, and given in doses of from xxx. drops to one fluid dram, in *distilled water*.

Liquor Calcis. — In consequence of Mr. Dalton's discovery, and Mr. Phillips's confirmation of its correctness, I have no doubt the London College will direct the liquor calcis to be made with *cold*, instead of boiling water, in the next Pharmacopœia; reasons for which will be found in Dr. Paris's Pharmacologia, Vol. II. p. 275, in a foot-note.

Magnesia Carbonas. — According to correct nomenclature, this preparation should be named magnesiae subcarbonas; satisfactory reasons for which the reader will find in Mr. A. T. Thomson's Dispensatory, third edition, p. 631, in a foot-note.

Remark. — If distilled water be employed, the magnesia will be lighter, and of a whiter colour.

PREPARATIONS OF ANTIMONY.

Liquor Antimonii Tartarizati. — It will be perceived by the fifth edition of Dr. Paris's Pharmacologia, Vol. II. p. 274, that the College has at length determined to substitute a weak spirit for the wine at present used in this preparation, which, if done, ought to be rendered palatable as a medicine for children, by the addition of raisins or some syrup; otherwise druggists will not be able to vend it as a substitute for the old antimonial wine, which is often done. If this remark is not attended to by the College, the former objectionable preparation will still be sold, the necessity for which may be removed by a little attention. I would therefore beg leave to suggest the following method of making the antimonial solution, instead of the present injudicious formula: —

R Antimonii Tartarizati, gr. xxxij.

Aquæ Distillatæ, ℥xiv.

Spiritus Rectificat. ℥ij.

Uvarum passarum, demptis acinis, unc. ij.

Macera per hebdomadam, et cola.

If it be considered preferable, the raisins may be first digested in the weak spirit for a week; the tincture thus procured may be strained off, and filtered through paper, in which should be dissolved the tartarized antimony, and the whole made up to sixteen ounces by measure, by the addition of water or a little more spirit. A similar preparation may be made by dissolving the antimony in twelve ounces of water, and by adding to the solution rectified spirits of wine,

and syrup of lemons, of each two fluid ounces: this, I believe, will be found to be an elegant and durable preparation. Both these contain precisely the same proportion of tartarized antimony as the present liquor antimonii tartarizati, viz. one grain in four fluid drams.

Pulvis Antimonialis. — I am anxious not to allow the present opportunity to escape, of directing the attention of the Profession to an excellent paper on the Analysis of James's Powder, by R. Phillips, F.R.S. Lond. & Ed. contained in the Annals of Philosophy for September, 1823. In the concluding observations respecting antimonial powder, Mr. Phillips observes: "For additional evidence as to the nature of this preparation, I beg to refer Dr. Paris to a statement respecting it, which has been made by Mr. Brande, and which, if I had remembered, would have saved me the trouble of an analysis. 'In examining,' says Mr. Brande, 'the antimonial powder from various sources, prepared according to the directions of the Pharmacopœia, I have found it of very variable composition: sometimes it contains the peroxide of antimony only, sometimes there is a proportion of protoxide, and in some few cases the powder has consisted chiefly of *bone earth*. These differences are referrible to the mode of preparing it: but in almost every case a very large proportion of the protoxide is lost during the process; and I have found it a matter of great difficulty so to conduct it as to obtain, upon the large scale, an uniform product. For medical use I should consider *emetic tartar* as the *only certain* and necessary preparation of antimony.'"*

"It will be observed, that without recollecting Mr. Brande's recommendation of emetic tartar to the exclusion of all other antimonials, I ventured to give similar advice; and I would conclude with remarking, that if it be possible to urge satisfactory reasons against a preparation, such reasons are contained in the passage I have quoted from Mr. Brande. It shows that pulvis antimonialis may consist almost entirely of phosphate of lime, or that it may be a mixture of phosphate of lime and peroxide or protoxide of antimony; and it is a perfectly well-established fact, that fifty times as much peroxide of antimony may be given as of the protoxide; that the large dose is inert, the smaller one may be dangerous; and yet to this uncertainty is the Physician exposed, although he may not be persuaded that 'he can never have derived any benefit from the exhibition of antimonial powder.'"

Liquor Arsenicalis. — "This appellation is certainly very objectionable; it should have been liquor arsenialis potasse,

* Manual of Chemistry, Vol. II. p. 180.

or more properly, as named by the Dublin College, liq. arseniatis potassæ. Why not give a more ready and scientific formula with the superarsenate of potash, in lieu of sublimed oxyd of arsenic, and of subcarbonate of potass?—the most proper directions for preparing which will be found in the Dublin Pharmacopœia, or that of St. Bartholomew's Hospital."

PREPARATIONS OF IRON.

Ferrum Tartarizatum.—Mr. Thomson observes, in the third edition of his Dispensatory, "It is remarkable that both the London and Dublin Colleges should err in giving a name to this *triple salt*; whereas much of the iron employed in the London and the Edinburgh process remains unaltered, or at least only in the form of a simple oxyd."

Liquor Ferri Alkalini.—Dr. Paris and Mr. Thomson have stated this to be a most injudicious preparation; for they remark, "that it cannot be exhibited in any form whatever without decomposition."* As there are such insuperable objections to the liquor ferri alkalini, and I believe it is but seldom prescribed, surely it is desirable that it should no longer be retained in the London Pharmacopœia. I would, therefore, with due submission, recommend as a substitute the following elegant chalybeate, the *Liquor Ferri Oxygenati* (so denominated by the late Dr. Beddoes):—

R Ferri Sulphatis, ʒss.

Acidi Nitrosi fortissimi (per pond.), ʒss.

Tere probè simul in mortario vitreo, donec effervescentia peracta, dein adde gradatim Aquæ Distillatæ, ʒjss.

Afterwards filter the liquor through *white* paper, placed in a *glass* funnel. The dose is from four to ten drops, three or four times a day, in an infusion of ginger, or infusion of quassia and cloves. It is an elegant and valuable chalybeate. When given in an infusion of quassia, after free evacuations of the bowels, it may be considered almost infallible as a vermifuge; and it is also one of the most powerful styptics for suppressing bleeding from the alveolar processes, after the extraction of teeth, and in other cases of hæmorrhage from the smaller vessels.

Vinum Ferri.—Respecting this preparation I would beg leave to refer the reader to Dr. Paris's observations, in the fifth edition of the Pharmacologia, Vol. II. p. 449. Mr. Thomson remarks, "that it is to be regretted that the College

* Vide Dr. Paris's Pharmacol. Vol. II. p. 277, and Mr. Thomson's judicious observations on this article, in his Dispensatory, third edition, p. 664.

did not follow the same plan it adopted for the solution of ammoniated copper, and employ a given portion of the ferrum tartarizatum, which readily dissolves in sherry wine, and forms a permanent solution." In lieu of the vinum ferri of the present Pharmacopœia, I would offer for consideration the following formula:—

R Tart. Potassæ et Ferri,* ʒjss.
Vini (Sherry), Oj. Solve.

The London College has again an opportunity of considering the best method of preparing the wine of iron: I should hope they will wisely decide, and benefit the Profession by their decision.

PREPARATIONS OF QUICKSILVER.

Hydrargyrum Purificatum.—As purified quicksilver is the basis of all the other mercurial preparations, should it not be placed first in the list of preparations of mercury in the next London Pharmacopœia, instead of the hydrargyri nitric-oxydum, as in the one of 1815?

Hydrargyri Oxymurias.—The name oxymuriate appears to be improper. Perhaps the name *deuto-muriate*—or *deuto-chloride* of mercury which most judiciously designates its chemical character, would be less exceptionable than any other of the three formulæ of the British Colleges. A preparation similar to that of the Dublin is to be preferred; reasons for which will be found in Thomson's Dispensatory, third edition, pp. 676, 677.

Hydrargyri Submurias.—Dr. Paris has stated (in his Pharmacol. Vol. I. p. 71) this to be "the most objectionable name of any." For the reasons he has assigned, ought not the old name, *calomel*, to be restored in preference to every other, as it is less liable to be affected by the continual change of chemical nomenclature? It is at present directed to be brought into a very fine powder, in the same manner as prepared chalk; but by the method of triturating calomel between two stones, termed levigation, it is reduced to as fine a powder without loss. The test of the Dublin Pharmacopœia ought always to be had recourse to, for ascertaining the complete separation of any corrosive muriate that may have been formed, and which should be ordered by the London College to be attended to in making this preparation.

Many serious errors have occurred in dispensing medicines, by the similarity of the names hydrargyri oxymurias and

* As prepared by the Dublin College.

hydrargyri submurias, which can only be prevented in future by changing the present name.

Liquor Hydrargyri Oxymuriatis. — A discerning critic has very properly remarked, "Whether this solution be intended for external or internal use, the College have not condescended to inform us." There can be no excuse for not giving such information, and therefore this suggestion should be attended to in the next translation of the *Pharmacopœia* sanctioned by the College. It is very desirable that the particular reasons for the introduction, and the uses, of every preparation and compound, should be fully explained by the translator. It is a duty which he owes the public.

I must beg leave to refer to the reasons for objecting to the present preparation, which will be found in Dr. Paris's *Pharmacol.* Vol. II. p. 277. I hope such authority will induce the College to expunge it, and introduce a more scientific solution.

I believe the following formula is entirely unexceptionable:—

Liquor Hydrargyri Oxymuriatis.

R Hydrargyri Oxymuriatis, gr. iv.

Acidi Muriatici, ℥vj.

Aquæ Distillatæ, f. ʒj.

Spirit. Tenuioris, ʒvj.

Tincturæ Croci, ʒij.

Tere probè simul in mortario vitreo ut fiat solutio; incip. sumendo ℥xx. nocte manequæ ex haustu Infusûs Lini, vel Decocti Glycyrrhizæ; posteaque pro re nata augeatur.

I prescribe this solution according to the following very agreeable formula:—

R Decocti Glycyrrhizæ, ʒv.

Aquæ Cinnamomi, ʒij.

Liquoris Hydrargyri Oxymuriatis (præp. ut suprâ),

Syrupi Aurantii, āā ʒss. Misce.

Ft. mistura, cujus sumat coch. ampl. ij. vel iij. statim post cibum, bis terve in die.

(To be concluded in our next.)

 PART II.

 ANALYTICAL R

I.

Medico-Chirurgical Transactions. Pu
and Chirurgical Society of London
(Part II.) With coloured Engra
London, 1823.

A LARGE proportion of the articles before us of the Transactions of the Society, will, we are of opinion, maintain its reputation.

Without alluding, at present, to any proposition, we proceed to place before the reader the papers in the order in which they are arranged in the volume.

XXI. *An Account of two Cases of I ordinary Dimensions.* By T. Bray

Case 1st.—A female, fifty-five years of age, and melancholic temperament, had been ill for the last twelve months, with uncommon loss of strength. She had experienced pain in the epigastrium, which generally continued for several hours. These attacks continued two or three weeks, for five or six successive days for the most part, but not always, succeeded by vomiting, which soon disappeared. About the middle of the attack of pain, she became the subject of a fever characterized by constipated bowels, a dark coloured urine, and great mental irritation leading to alienation. She suffered no change continuing for a long time in this state, and with severe pain in the left iliac region, tenderness on pressure. "This urgent state continued unmitigated for sixteen or eighteen days, when it became suddenly better, and soon followed by evacuation, which contained a calculus. This was followed in a short time by the subsiding of febrile symptoms; but she remained suffering from melancholy for some months,

length recover, under the gentle and long-continued influence of mercury on the system."

The long diameter of this calculus was $1\frac{3}{8}$ inches, its short diameter $1\frac{1}{8}$ of an inch, and its circumference at the widest part $3\frac{3}{8}$ inches. It did not possess a concentric laminated arrangement, but was radiated from the circumference towards the centre; having here and there interposed between the radii, particularly towards the middle of the calculus, minute portions of a brown friable matter. The surface was rough and tuberculated. The chemical analysis of this calculus, as detailed by Mr. Brayne, sufficiently proves its biliary origin. The subsequent history of the patient, however, puts its nature beyond doubt.

About a year after the patient had passed this very large calculus she died of hydrothorax. Mr. Brayne found, on dissection, the liver of its usual size and colour, but more solid and close in its texture. "The cystic and hepatic ducts were of the usual dimensions, but the gall-bladder itself was smaller and very much thickened, containing only a little pale unhealthy bile. It had contracted a strong adhesion, about the size of a shilling, to the duodenum, close to the pylorus. There was no uncommon appearance of vascularity. On removing these parts from the body, a communicating aperture, large enough to admit a crow-quill, was discovered in the centre of the adhesion. One kidney was studded with numerous flat tubercles in its cortical part." There was no other morbid appearance of consequence, except an accumulation of serum in the right cavity of the pleura, amounting to about $\frac{3}{4}$ xxiv.—This dissection illustrates, in a very satisfactory manner, the formation and the passage of the calculus into the intestines.

Case 2d.—Mr. Brayne was called, in the evening of the 24th February, 1822, to a married woman, aged sixty-five, labouring under an obstruction of the bowels. He found her lying on her back with her knees raised, the abdomen prodigiously inflated, with frequent gripings, incessant vomiting, the extremities cold and damp, and the pulse scarcely perceptible at the wrist. Although her articulation was indistinct, she was nevertheless sensible, and her countenance did not evince the Hippocratic expression of a dying person. She had rejected every thing from her stomach since the 19th, when the sickness had suddenly invaded her without any apparent cause. Various measures had been resorted to by the medical attendant without success.

Mr. Brayne ordered her to have three drops of croton oil in two pills, of which she was to take one directly, and repeat it in four hours if necessary; he also directed warm applica-

tions to the extremities, "hot fomentations to the abdomen, and, in an hour or two, a little wine." The second croton pill was taken. On the following morning the bowels had not been relieved, but the stomach was more quiet than it had been. Some castor oil was next given, and, at intervals, a colocynth pill with minute doses of opium. In the evening some thin offensive dark-coloured stools had been procured. Various purgatives and injections were persisted in; and after two or three days, evacuations more natural in colour and smell were freely passed. From this time she rapidly improved. A few days afterwards (March 11th) she passed a biliary calculus, in figure and size resembling half a large pigeon's egg.

On the 17th March the same train of symptoms recurred in a slighter degree, and in a few hours she passed another calculus, of larger dimensions, and of a flat square shape. On applying the flattened extremity of the former and smaller calculus to the greater side of the other, (which side was concave, as if compressed when soft by some convex body,) a correspondence was observed which gave the idea of intimate juxta-position.

For some months previous to the severe symptoms, for which Mr. Brayne's attendance was first requested, this patient had been frequently affected with a dull pain in the epigastrium, with a sense of weight and oppression in that situation. These attacks commonly occurred towards bed-time, and varied in their continuance from half an hour to two or three hours. They were not accompanied with sickness, nor followed by jaundice. After the passage of these calculi the pain and load at the epigastrium entirely subsided. June the 4th, she complained of symptoms distinctly marking the supervention of hydrothorax, as in the former case; she is still, however, under the author's observation. Mr. Brayne was averse from destroying the integrity of the calculi in this case for the purposes of analysis. The plate which accompanies these very interesting cases is beautifully executed.

XXII. *On the Influence of Local Irritation in the Production of Diseases resembling Cancer and other Morbid Alterations of Structure.* By Henry Earle, Esq. F.R.S. &c. &c.

This is a paper of considerable merit. Its author wishes to call attention to those cases which, from their progress and character, bear a close resemblance to those malignant affections, which experience shows to be too deeply rooted in the constitution to be eradicated by any local operation. Mr. Earle considers those cases to originate from some local irritation, and to be subsequently maintained by local circum-

stances. In some of them the constitution may be previously disposed to disease, but in many it is only affected by the continual pain and excitement produced by the local affection. "From the experience," Mr. E. observes, "I have already had, I feel convinced that, by early directing our views to counteract the influence of local irritation, we may often succeed in restoring healthy action; whilst, in more advanced stages of disease, we may be induced to resort to operations with far greater confidence of success than the appearance and progress of the complaint would warrant, independently of any such exciting causes."

On Diseases of the Lips. — The author considers that any ulcerations about the mouth will often be extremely difficult to cure, and, if neglected, will often assume, from the continual irritation to which the parts are subjected in the diurnal performance of their functions, the induration and other characteristics of carcinoma. "The irritation arising from the introduction of food, the effort of speaking, and the constant flow of saliva, are sufficient to keep up the morbid disposition." After a time the neighbouring glands will often become enlarged, and the Surgeon be thus misled respecting the nature of the affection. In every instance that Mr. Earle has witnessed, "the disease has occurred either at the angle of the mouth or the lower lip, which, from its situation and greater mobility, is much more liable to be irritated in every action in which the mouth is concerned; it is much more readily drawn within the teeth, and when ulceration has taken place, it is exposed to the constant flow of the saliva, which, particularly in cold weather, causes excoriation and thickening in the surrounding integument."

Mr. Earle subjoins a very interesting case in illustration of this affection of the mouth which was cured by excision. To this case we cannot more particularly advert. Mr. E. alludes to other instances of this disease; and he is led to infer, from the result in all but one case, that it is not carcinomatous, or dependent on any constitutional disease, but arising from the continual local irritation above alluded to. From his own experience, and from witnessing the success of others, he considers that few cases afford greater promise of success than those corroding ulcers, with scirrhous edges, which occur about the lip. "The operation," he states, "is so simple, and the wound so constantly unites by the first intention, that in cases that do not readily yield to local and constitutional treatment, it is far better to resort to it, and often the deformity will be less than when the ulceration heals without any operation."

Mr. Earle next enumerates similar occurrences of disease

"in the integuments of the nose and face," arising from, and aggravated by catarrhal affection, the habitual use of soap, the irritation of shaving, &c. When the disease remains stationary, or is inclined to spread, he recommends the morbid portion to be removed, either with the scalpel, the potassa fusa, or the arsenical paste, as may appear best adapted to the individual case.

On Diseases of the Tongue.—Mr. Earle very justly observes, that when any morbid action is set up in this part, many things contribute to maintain it. The extreme mobility of that organ, the almost continual use of it in eating, drinking, and speaking, the contact of the teeth which are often irregular or decayed, are quite sufficient to interrupt any efforts to restore a healthy action. The continued operation of these causes soon induces a disease which puts on all the alarming characters of carcinoma. The period of life, however, at which many of these cases occur, and the frequent success which follow operations on them, are alone sufficient to create doubts of their being carcinomatous. Respecting the management of these affections Mr. Earle gives the following directions:—

"Under the head of local treatment I would place in the first rank, the removal, as much as possible, of all local stimuli, such as the taking away any decayed or projecting tooth, the shielding the tongue from pressure by covering the teeth with wax or soft lint, the complete privation of the faculty of speech, the frequent cleansing of the mouth with a stream of water, any medicated liquor from an elastic gum bottle, instead of gargling or washing the mouth by any muscular effort, the employment of the most mild unirritating food, and, in bad cases, the prohibition from the use of solid food, substituting in its room milk and strong broths, &c." . . . "When there is any enlargement of the glands, it will be right to combine with this the repeated application of leeches under the chin. As local applications to the ulcerated surface, few are more efficacious than a solution of nitrate of silver, or very diluted nitric acid, in the proportion of three or four drops to the ounce. Occasionally a solution of arsenic is very useful. Any of these may be thrown upon the ulcer with a syringe, which will be found better practice than keeping lint moistened with any lotion constantly applied to the part.

"In two instances of apparently very malignant diseases of the tongue, I have succeeded in obtaining perfect cures by the plan laid down. A similar practice was pursued in the case of a boy at the Foundling, in whom the disease was of a very peculiar kind. Clusters of very minute semitransparent vesicles pervaded the whole thickness of the tongue, occupying nearly one-half, and projecting considerably both above and below that organ. The slightest injury caused them to bleed most profusely, and in some places the clusters were separated by deep clefts, which discharged a fetid irritating sanies. This

disease, which had resisted various plans of treatment, both local and constitutional, gradually yielded to a strict attention to perfect quiet and cleanliness, combined with large doses of hyosciamus, which was increased to the extent of ʒj. of the extract daily. I have employed the same remedy in many cases of ragged irritable ulcers in the tongue, and have been surprised at the influence which it seemed to exert over these affections. In some cases no other remedy has been employed, and its effect has been most marked and unequivocal. I have employed other medicines of the same class, but without any similarly beneficial result. Mercury, in all these cases, if administered in any quantity, seldom fails to aggravate the disease." Pp. 284—286.

On Diseases of the Prepuce. — Mr. Earle observes, that "there is, perhaps, no instance which affords a better illustration of the deleterious influence of the constant application of local stimulants, than the peculiar affection which occurs in the prepuce of old people." He gives the following history and progress of this affection, "which has been generally considered as cancer of the penis : " —

"It invariably occurs, as far as my observation goes, in persons with elongated foreskins. A want of proper attention to cleanliness in removing the secretion from behind the corona glandis, will often lay the foundation of this complaint. The prepuce, from the confinement of this irritating matter, is excoriated, and what at an early period of life would be called gonorrhœa præputii is the consequence, the part becomes œdematous, the frænum thickened, and it is soon impracticable to withdraw the foreskin. Phymosis being thus established, the frequent passage of the urine over the inflamed skin causes it to ulcerate, and the continual application of so stimulating a fluid produces much surrounding swelling and induration. Not unfrequently the natural opening in the prepuce becomes nearly obliterated, and the urine dribbles away through several ulcerated apertures. An intractable disease is thus established, from which, when it has attained this height, the knife is the only remedy." — Pp. 287, 288.

Treatment. — "If taken at an early period, the disease is perfectly remediable by removing the exciting causes. The greatest attention to cleanliness is the first requisite, and for this purpose, an elastic gum syringe, with a blunted pipe, should be frequently employed to wash away the secretion from behind the corona glandis, and to convey any medicated lotions to correct the morbid action which has been excited. Where phymosis is quite established, an elastic gum catheter should be introduced; and if no disease in the urethra, or prostate gland prohibit the practice, it should be retained in the bladder. The irritation from the constant flow of the urine will be thus effectually prevented; and, generally speaking, the swelling and hardness will subside sufficiently to enable the patient to withdraw the skin to admit of the exit of the urine without passing over the prepuce. The introduction of a small portion of sponge will often

assist much in dilating the contracted orifice; but when these do not succeed, it will be right, in some cases, to divide the prepuce and expose the glans penis. I have known this operation succeed perfectly in a case which had been condemned to amputation." "For the reasons, then, above stated, amputation of the body of penis should not, on light grounds, be undertaken; and only in cases where the induration has extended itself to the corpora cavernosa, glans penis, or where the state of the patient's constitution renders it advisable. With the views I have been led to entertain of the nature and origin of these affections, I should, with great confidence, recommend the removal of the diseased integument in those cases which did not subside by the plan of treatment already laid down. Even when the inguinal glands were enlarged, I should not be disposed to abandon the case as hopeless, as they will often subside on removing the exciting cause." — Pp. 289—292.

Mr. Earle next notices the effect of local irritation in the production of "new growths." We must refer our readers to the original paper for his observations on this subject.

XXIII. *On Chimney Sweepers' Cancer.* By H. Earle, F.R.S. &c. — This disease, which is invariably produced by the irritation of soot applied to the rugæ of the skin, is described by Mr. Earle in this paper. From its rare occurrence, and its appearance at an advanced period of life, he considers that a constitutional predisposition is necessary to its existence. This opinion is confirmed by the liability of the same family to become affected with it. With respect to its treatment, Mr. E. observes:—

"As far as my observation goes, no topical applications or internal remedies have the slightest influence over the disease. The scalpel is the only resource, and that may be resorted to with the most confident expectations of success, provided the whole of the diseased part can be removed. Even where the inguinal glands are enlarged, it ought to be attempted; as I have before stated, that the disease commonly spreads to parts immediately contiguous, and the enlarged glands will often subside. When the testicle is affected, provided the spermatic chord has not participated, it will be right to give the patient the chance of recovery, rather than abandon him to a miserable and painful death." — Pp. 301.

Mr. Earle concludes his remarks with exhorting the Surgeon to lose no time in the useless exhibition of remedies, but to proceed at once to the extirpation of the diseased parts. Two cases are subjoined to this article.

XXIV. *On the Destruction of the Fœtal Brain.* By M. Hammond. — Mr. Hammond details a case in which embryotomy was performed, yet the child lived forty-six hours afterwards. He observes, that "this case may be useful in a practical point of view, as it tends to show that the removal

of a part, and the destruction of the whole cerebrum, does not insure death to the fœtus; and in such cases, where the head must be opened, it would be better to divide the medulla oblongata or the spinal cord; for the mother, who is generally prepared for the operation by the assurance that her child is already dead, suffers considerable pain on finding it born with life, but without brains."

XXV. *A Case of Bronchocele*. By Henry S. Roots, M.D. &c. &c. — This case shows the good effects of iodine in a case of bronchocele occurring in a lady nineteen years of age. Dr. Roots prescribed this substance according to the following formula: — "Potassæ hydriodat. gr. xxxiv.; ceræ albæ, ʒij.; adipis suillæ, ʒiiss. M. The size of a garden bean to be rubbed into the tumour night and morning for ten minutes at each time." The proportion of iodine in the ointment was afterwards increased until it reached fifty-six grains; and during the latter part of the treatment, the internal use of the remedy was also adopted, twenty drops of the tincture of iodine having been prescribed three times a day. Two doses of the tincture every day were only taken, in consequence of its having produced sickness and pain in the stomach and intestines. The tumour entirely disappeared.

Dr. Roots had, at the period of his writing this case, a patient under his care suffering from a very considerable bronchocele, which has very materially diminished under the use of iodine.

(To be continued.)

II.

Formulary for the Preparation and Mode of Employing several New Remedies; namely, the Nux Vomica, Morphine, Prussic Acid, Strychnine, Veratrine, the Active Principles of the Cinchonas, Emetine, Iodine, &c.: with an Introduction and copious Notes. By CHARLES THOMAS HADEN, Surgeon to the Chelsea and Brompton Dispensary, &c. Translated from the "Formulaire pour la Préparation et l'Emploi de plusieurs Nouveaux Médicamens, tels que le Noix Vomique, &c. Par F. MAGENDIE, Membre de l'Institut de France, &c. Troisième Edition. 1822." 12mo. Pp. xxiv. 110. London, 1823.

WE are much indebted to Mr. Haden for this excellent translation of a work which, in our opinion, ought to be in the possession of every Practitioner who wishes to keep pace with the progress of science — to do all in his power for his

patients, and thus advance his own reputation. The notes which Mr. Haden has subjoined, add considerably to the usefulness of the original; and his introduction contains some very powerful arguments in behalf of the propriety of rendering science and philosophical observation more subservient to the practice of medicine than it is at present amongst too many in the Profession.

When showing the futility of the objections commonly urged against the use of new remedies, Mr. Haden offers the following very just observations:—

“The translator, however, cannot refrain from mentioning a species of objection to the adoption of such new forms of remedy because he considers it to be a superficial one; and an injurious one too, for it is subversive of one of our best means of improving the therapeutical branch of our Profession. He is almost angry when he sees the popular authors of the day sneering at the introduction of new remedies, and saying, with what he considers to be an ignorant self-conceit, ‘Ay, here they come one after another vaunted to the skies for properties which sober investigation shows not to belong to them; we shall soon see them laid on the shelf, until they are again held up to the world as prodigies by some future enthusiastic searchers after novelty.’ How humiliating such remarks are to a person who makes them! for it is easy to prove that in the great majority of cases the sneer is applicable not to the remedy, but to the persons who are too ignorant or too indolent to investigate its properties so thoroughly as to use it with success. Men who reflect for themselves, and are not content with conclusions which they are drawn from an accurate and philosophical consideration of all the circumstances of each individual case, know full well that the trials of new remedies which are made by the Profession at large are so superficial and inconclusive as to be a disgrace to themselves, and not worthy the slightest attention when the value of such remedies is under discussion.”—Pp. xvii. xviii.

All are not equally qualified, either by education or original talents, to observe accurately, and to deduce concise and useful inferences from their observations; but it is the power of many to perform these requisites of their professional duties in a much more creditable manner than they are too frequently executed. If, however, such a duty be so serious an undertaking, and be thus incompatible with the indolence of some—with the knowledge of others—or with the comforts of a few; if, moreover, some may suppose that the time and trouble, which thus would be directed to science and observation, might be more lucratively, although much less beneficially employed, let them learn not to depreciate those who consider the crafts of trade beneath the dignity of their profession, and who wish to contribute towards the advancement of the science which they profess.

It would neither be conformable to our limits nor to our intentions to give a review of the individual substances so ably and minutely treated of in this work. As a specimen, however, of the manner in which both M. Magendie and the translator have executed their undertakings, we shall first briefly direct our attention to MORPHINE.

M. Magendie first offers some general remarks on *morphine and its salts*: he next describes "the manner of preparing morphine." Here Mr. Haden has appended some judicious notes respecting the modes adopted by our own and the French chemists to procure this alkali from opium. M. Magendie afterwards notices "the action of this substance on man and on animals." The "preparation of the *acetate of morphine*" next engages his attention; he also gives the mode of preparing the *sulphate of morphine*, and concludes the consideration of this subject with stating, in detail, the different "modes of prescribing the salts of morphine." For the formulæ here recommended we must refer our readers to the translation. M. Magendie prescribes both the *acetate* and *sulphate* of morphine, alternately, in the form of a syrup; "for," he observes, "by varying the salts of alkaline medicines, their action on the animal economy may be kept up for a very long time, and without increasing the dose too much."

VERATRINE is the next substance which we shall particularly notice. This new alkali was obtained by MM. Pelletier and Caventou from the seeds of the *veratrum sabadilla*, and from the roots of the *colchicum autumnale* and the *veratrum commune*. After describing the mode of preparing the veratrine, M. Magendie details its chemical properties and its action on animals: he next examines the action of this alkali on man in a state of health and disease, and concludes the consideration of it with remarks on the "cases proper for its exhibition." As veratrine constitutes the active constituent of colchicum, Mr. Haden introduces the following interesting case in his notes, at the place where M. M. treats of the action of veratrine on animals:—

"Colchicum certainly induces inflammation of the mucous membrane of the bowels whenever it is given in too large a dose; the translator, from a large experience, thinks in all cases: but it never, probably, produces tetanic convulsions, nor any thing resembling them. The translator thinks it right to give the following fatal case of gout, from an over-dose of the tincture of colchicum bulb, in elucidation of this opinion. He has also heard of other corroborative cases, where death followed a large dose of other preparations of colchicum, especially one where a female took a teaspoonful of the seeds. The note of the case of gout, made at the time, has been kindly furnished by the attending Practitioner.

"Mrs. —, aged forty, after frequently suffering from gout,

requested her medical man to give her the colchicum in a very small fit. She took \mathfrak{z} iss. of a tincture made by infusing \mathfrak{z} iv. of the root in \mathfrak{z} viii. of proof spirit for three days, the mixture being kept at 100° of temperature. This was given in the morning of December 5th. In the evening it had produced no effect, except slight quishness. Calomel. gr. iij. opii gr. j. was ordered at bed-time, as a purging draught for the morning. However, in the night, vomit and purging commenced, and continued all the next day, in spirit effervescing volatile saline draughts with opium; so that in the evening of the 6th, opii gr. j. camphor. gr. iij. were given repeated in two hours.

" On the 7th, from accident, she was not seen till three P. when she was found in the collapse preceding death. The gout previously gradually subsided. It was stated that she became faint at two o'clock P. M. and not till then were her friends alarmed. opium and spirits warmth was reinduced upon the extremities, as feeling of greater comfort produced; but the pulse never completely recovered, although the sickness was completely subdued; so that ten P. M. she fell into an apoplectic kind of sleep, which terminated in death before morning.

" It is peculiar, in this case, that Mrs. — was delicate, and so years before had nearly suffered death from incessant vomit attended by cold extremities; it was relieved by inducing gout the swelled knee by mustard cataplasms. In the fatal attack sinapism was applied, with the effect of producing great pain, without inflammation or heat of skin.

" It should be mentioned also, that this female's mother is exceedingly susceptible of the action of colchicum, in even very small doses. The attendant Practitioner begged also to add, that he only prescribed so large a dose as \mathfrak{z} iss. because the tincture had only been made three days, and the formula directed it should be infused a fortnight. — Pp. 61, 63.

On IODINE M. Magendie treats very fully and satisfactorily. For a full account of the various preparations of the substance, we must refer our readers to the work before us or to the Number of the REPOSITORY for August, 1822 where they will also find copious directions for its use. M. Haden has given the following observations in a note:—

" Besides using the tincture of iodine successfully in a few cases of scrofula, the translator once saw it signally beneficial in a case probably of pulmonary tubercles, in which he prescribed it according to the suggestion of Dr. Baron in his last work on Tubercles. A youth passed the winter and early part of the spring of 1823 suffering from an almost unremitted succession of attacks of pulmonary excitement. His pulse rose during these exacerbations, his skin became hot, cough came on, and frequently the attack did not terminate without the expectoration of purulent matter and the occurrence of hectic fever and of night sweats; generally, however, these exacerbations were speedily and perfectly dissipated by the moderate use of colchicum, so that the pulse fell to 72 beats in the minute, and the

the other symptoms subsided. Still, early in May, the patient was thin, pale, and in other respects having the appearance of a person labouring under incipient phthisis. Under these circumstances he took ten drops of the tincture three times a day. He almost immediately said, he had not received so much benefit from any former medicine; and after continuing its use for a month, he was discharged apparently well, not having had one feverish attack, and being fat and with the countenance of health.

"In a case, too, of intermittent fever (a girl eight years old), in which the fever had repeatedly recurred after being suspended by cinchona, the tincture of iodine was prescribed in a small dose three times a day, and the fever did not again recur."—Pp. 96, 97.

The other substances, whose pharmaceutical and medicinal properties are minutely examined into by M. Magendie are—resin of nux vomica, strychnine, narcotine or the matter of Derosnes, emetine, pure emetine, alkalies extracted from the different species of cinchona, prussic acid, solanine, delphine, gentianin, extract of opium deprived of morphine, extract of opium deprived of the matter of Derosnes, lupuline, and brucine.—We express our thanks to Mr. Haden for his faithful translation of M. Magendie's Formulary, and for the excellent introduction and notes with which he has enriched it.

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

Recherches sur le Ramollissement du Cerveau: ouvrage dans lequel on s'efforce de distinguer les diverses Affections de ce Viscère par des Signes caractéristiques. Par LÉON ROSTAN, Médecin de l'Hospice de la Vieillesse—Femmes (*Salpêtrière*.) Professeur de Médecine Clinique. Seconde édition. Paris, 1823. 8vo. Pp. 503.

Researches on Softening of the Brain: a work in which the various Affections of that Viscus are attempted to be distinguished by characteristic Symptoms. By LÉON ROSTAN, Physician to the Hospital for Aged Females (*Salpêtrière*.) Professor of Clinical Medicine. Second edition. Paris, 1823. 8vo. Pp. 503.

(Concluded from page 345.)

DIAGNOSIS. *Symptoms of the first period.*—The fixed and
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obstinate *headach* which is observed at this period. M. Ross considers to be a symptom of high interest: alone it is of little value; but when accompanied with *numbness, formication, sense of weight, contraction, pain, and convulsions* in the limb of the side opposite to the pain, if the understanding and senses become weakened, softening of the brain is to be feared. The fixed headach announces a local action to be going on in the brain.

Vertigo is common to many diseases. This symptom indicates a congestion towards the encephalon.

The *diminution of the intellect*, although it may depend upon a local lesion, does not in any manner indicate it. All that ought to be deduced from it is, that the organ of thought is primitively or secondarily affected; for if it were not diseased the function would not be injured. This diminution of the understanding may depend on many causes: — 1st, On general congestion; 2d, on a serous or purulent effusion in the ventricles or between the meninges; 3d, on inflammation of the superficies of the brain; 4th, on a central affection; 5th, on apoplexy; 6th, on softening of the brain; and, lastly, on all lesions of the brain which have their seat in the thinking part, or which react upon it, and even on diseases of distant organs which are connected in some manner with it.

The *tendency to sleep*, also, merely indicates a general lesion of the encephalon.

The *delirium*, which cannot happen without the thinking part being altered, either primarily or secondarily, is, like the diminution of the understanding, a sign of affection of the brain; but it does not unequivocally point out a local affection, although it may depend upon a local lesion of the encephalon.

The same reflections are applicable to mental alienation which sometimes precedes the softening, and which may also be dependent upon it.

The *numbness, formication, pricking pain, sense of weight, convulsions, contraction, and incipient paralysis* of the limbs on one side only, are more precise signs than those first pointed out: they indicate, in an unequivocal manner, a local action confined within the encephalon or its dependencies. So of them induce a presumption of an inflammatory process going on, especially when they are accompanied by general symptoms of reaction, such as pain, convulsions, and contractions; others characterize an alteration of a different nature, such as sense of weight, numbness, incipient paralysis, &c.: the last are more frequent than others. These symptoms are sometimes the result of a simple, partial congestion: they are commonly, at such times, removed w

much facility, or else rapidly augment, and speedily induce death. They must persist and gradually augment in intensity to acquire any value.

These symptoms, as well as the preceding, still only indicate a local lesion of the encephalon; they are not pathognomonic of softening of the brain. Every alteration which compresses or gradually destroys the encephalon may produce them.

The symptoms furnished by the senses, if they manifest themselves on both sides, can only indicate a general lesion; when on one side only, they may serve to locate the affection. Their augmentation ought to accompany inflammatory softening (encephalitis); their diminution atonic softening.

The symptoms which the organic functions present are valuable as therapeutical indications; but they teach us nothing in the way of diagnosis: these M. Rostan therefore passes over in silence.

Symptoms of the second period. — When the symptoms which we have just been mentioning augment more or less suddenly in intensity, after having remained some time stationary, it is the commencement of the second period. At such times these first symptoms acquire much value; they characterize softening: without them it is impossible to know whether the disease be not a cerebral hemorrhage, &c. They announce a process of long duration, a lesion which has not suddenly supervened.

The most constant and characteristic symptom of this period is the paralysis of the limbs: this occurs either suddenly or gradually, but in a more or less rapid manner, and is the least equivocal symptom of some local lesion of the encephalon in the lobe opposite to the paralysed side. This paralysis may depend on diverse circumscribed lesions; but M. Rostan considers that the way in which it shows itself is sufficient to distinguish it. When the paralysis is general, the lesion is general or central; or else, if local, the sound hemisphere is compressed. The diagnosis of such cases is most obscure: they are, however, rare. The paralysis most frequently begins with the arms; but occasionally it has commenced with the leg, although the alteration was in the brain: this is accounted for, if it be admitted that it is not the same portion which influences these two organs. When the paralysis attacks the leg of one side, and the arm of another, it indicates an alteration in each hemisphere in a different region. Paralysis of the tongue does not serve much to locate the affection. Paraplegia depends on a lesion of the spinal marrow.

Paralysis of a limb may depend on the want of circulation

in that limb, owing to obliteration of the principal artery. This paralysis may be recognized by the absence of other cerebral symptoms, by the lividity, coldness of the limb, and especially by the absence of circulation. Paraplegia may be the result of obliteration of the aorta: it is speedily fatal.

A tumour developed on the course of a nerve, or in such a situation as to press upon the nerve, may occasion paralysis of a limb: this must be borne in mind, and error avoided by attentive examination.

The diseases of the heart frequently terminate in general paralysis or hemiplegia, which may impose on those who are inexperienced. A knowledge of these diseases should make us doubtful regarding the value of paralysis as a diagnostic softening of the brain: it is the same with respect to the paralysis which supervenes in some acute diseases: like delirium, it is purely symptomatic.

Some narcotic substances produce paralysis, which it is very difficult to account for: metallic vapours, especially those of lead, act in the same manner: but in these cases the particularity of the cause cannot be overlooked, and all error is impossible. These paralyzes may, however, depend upon some particular modification of the encephalon.

The *pains of the limbs* of one side of the body are an important diagnostic symptom, when conjoined, at the same time, with other signs of cerebral affection. These pains sometimes indicate an inflammatory action going on in the lobe of the brain opposite to the pained limb.

Contraction of the limbs is a sign of an equal value with the preceding. The same may be said of the *convulsions*.

The *headach* which commonly persists at this period, and of which the patient only complains by putting his free hand slowly upon the painful part, announces a local action to be going on in the brain.

The *diminished understanding*, which is much more frequent in this period than in the first, commonly indicates compression of the brain, or lesion of the part appropriated to thought. As it is not an index of any local affection, it cannot be a pathognomonic symptom of softening of the brain, although the symptom may depend, as has been before observed, on a local lesion.

The coma and carus which occur at the end of the disease, announce its progress, and the successive invasion of all the encephalon, by some compression made upon it.

Softening of the brain frequently occasions a *particular redness of the face*; and although redness is a symptom common to many diseases, it offers in this case a particular character. The whole of the face is red, and in an uniform

manner: in this redness the neck participates, and it ends at the chest either abruptly or in an insensible manner, in proportion to its distance from the superior extremities: this phenomenon indicates a congestion towards the head. The complaints, the cries, the agitation of the patient, cannot be considered as characteristic phenomena; but they ought not to be neglected.

Local diagnosis.—According to the researches of MM. Delage, Foville, and Pinel-Grandchamp, the grey substance of the brain having been found alone altered when the movements had experienced no modification—having been found deranged, conjointly with the white substance, when the movements had been injured at the same time as the understanding—and the white substance being found alone altered when the movements only had been affected, the understanding remaining unaffected—it is to be concluded that the cortical substance presides over the understanding, and the white substance over the movements.

The corpus striatum having been found alone altered, whenever the inferior extremity had alone been paralysed, the thalamus opticus being found diseased when the movements of the arm had been disordered; finally, these two parts having been found disorganized when the hemiplegia was complete, it may be concluded that the corpus striatum is connected with the movements of the lower extremity, and the thalamus opticus with those of the arm.

Should experience confirm these data, we may then be able to recognise, *à priori*, which of these parts is altered, according as the understanding or movements of the arm or leg may be the isolated or simultaneous seat of the morbid symptoms.

Progress of the disease.—As regards the diagnosis, the progress of the disease is of the highest interest, as it is almost sufficient of itself to characterize it. It is essentially progressive. At first there are slight symptoms of congestion; then formication, numbness, sense of weight, stiffness of the limbs of one side, and obstinate cephalalgia; soon afterwards complete paralysis, immobility, insensibility, pains, contraction, convulsions in the limbs, weakness of the intellectual faculties, disorder of the senses; finally, coma, complete paralysis, and death. By this march M. Rostan conceives it is difficult not to distinguish the disease of which we are treating from all other cerebral affections.

Softening of the brain may be confounded with sanguineous or serous congestion, inflammation of the meninges, apoplexy, hemorrhage between the dura mater and the *feuillet* of the arachnoid which covers it, cancer of the brain, fungous

tumours of the dura mater, tubercles, hydatids, bony tumour of the internal parietes of the cranium, some neuroses. &c.

1. *Sanguineous congestion.* — By the general symptoms, sudden invasion, and its speedy termination, whether favourably or unfavourably, it is impossible not to distinguish disease from softening.

2. *Serous congestion.* — Symptoms, general and gradual. This disease is most commonly the consequence of any cerebral affection, which it is almost always easy to recognize.

3. *Arachnitis.* — Symptoms, general; febrile symptoms strongly marked; absence of precursory phenomena; rather, these phenomena are not the same as those of softening; shivering, heat, insensibility. Delirium is not a necessary symptom of arachnitis; it can only exist when the thinking part of the encephalon is primarily or secondarily injured; for if it were in a perfectly healthy state, there could not be delirium. In some extremely rare cases, arachnitis occasions local phenomena; this happens when the inflammation is more pronounced on one side than on the other. The diagnosis of such cases is very obscure.

4. *Apoplexy.* — By apoplexy M. Rostan means extravasation of blood in the brain. This disease considerably resembles softening, both by its symptoms and frequency. In order to facilitate the diagnosis, M. Rostan divides apoplexy into three varieties, viz. into severe, moderate, and mild apoplexy.

If it be severe, crisis takes place immediately with the previous symptoms of the disease; the paralysis is general, the stools are passed involuntarily; paralysis of the senses occurs, and stertorous breathing; the pulse is oppressed, and the patient dies in a few hours, or in two or three days at the most. Softening of the brain never pursues this course, it has so short a duration.

Moderate apoplexy, which is the most difficult to distinguish, happens *suddenly*: the symptoms are immediately carried to the highest degree of intensity, and on the following days diminish, when the disease terminates by resolution. When it terminates fatally, the symptoms commonly go on increasing; but under such circumstances, at the end of some days, a degree of softening is formed around the extravasation, which is an extraneous body. Coma is the last symptom of softening, but the first in apoplexy; in the latter the unpleasant symptoms diminish, whilst in the former they go on augmenting: when they go on augmenting in apoplexy there is softening, and, moreover, almost always absence of precursory signs. When precursory phenomena have been present, the softening has existed before the apoplexy.

these symptoms unequivocally announce some diseased process going on in the brain.

If the apoplexy be mild, it will be very easy to distinguish it from softening; paralysis of the limb, embarrassment of speech, &c. are present. Resolution, however, takes place speedily; the symptoms gradually diminish, and convalescence is established: the progress of softening is inverse.

5. M. Rostan is not aware of any sign which can indicate the apoplexy or hemorrhage which is situated between the external surface of the *feuillet* of the arachnoid and the corresponding surface of the dura mater: the disease is, however, extremely rare.

6. *Cancer of the brain* begins by laminating pains in the head, which at first return in paroxysms, but afterwards become incessant; at a later period paralysis, convulsions, epilepsy, idiotcy, mania, declare themselves; the limbs are the seat of lancinating pains; the skin is of a straw colour. The progress of the disease is essentially chronic, and sometimes continues for several years. This complaint cannot be confounded with softening of the brain.

7. The progress of fungous tumours of the dura mater is slow, and they do not give rise to any peculiar symptoms.

8. Hydatids in the brain are extremely rare: M. Rostan has seen but one instance of them: their progress is slow and chronic.

9. Tubercles in the brain do not give rise to local paralytic symptoms, as might be believed. In the cases hitherto published, a very violent headach, and especially intense vomiting, and some general symptoms, such as vertigo, debility, and impossibility of holding himself upright, have occurred. This disease does not, in M. Rostan's opinion, resemble in any thing softening of the brain.

10. Bony tumours of the internal parietes of the cranium. The progress of these tumours is much slower than that of softening. M. Rostan considers that they are owing to old venereal affections: the external parietes of the cranium are covered with exostoses, as well as the long bones; pains in the bones are also felt.

11. Syncope is characterized by loss of knowledge, paleness of the face, slowness of the circulation and respiration, with loss of power of the limbs. It continues but for a short time, and leaves no trace behind. The symptoms are general.

12. In asphyxia there is a purple injection of the face, suspension of respiration and circulation, coldness of the skin, loss of power in the limbs: there are always general symptoms, which have always a special cause, easily distinguishable.

13. Lethargy is only a profound *carus* : it is a symptom different cerebral affections.

14. In epilepsy there are violent convulsions, common of short duration, to which succeed stertorous sleep; there are general symptoms : nearly the same may be said of hysteria.

15. In catalepsy, if the patient's limbs be put in one position, they remain in it ; the pulse and respiration are slow. The symptoms are general, and of a perfectly peculiar character.

Treatment.—There cannot be, according to M. Rostan, any preservation against this disease, as we are as yet unacquainted with the predisposing causes of softening of the brain ; but when the symptoms which characterize the first period have manifested themselves, such as headach, vertigo, somnolency, loss of memory, numbness, sense of weight, tremulation, stiffness, pains in some limb, diminution, exaltation, perversion of the intellectual powers, they must be immediately combated.

Hygiène.—Those alimentary and medicinal substances which exert a strong and speedy action on the encephalon should be strictly avoided. Wine, spirits, coffee, and spice are, according to M. Rostan, of this number. Excess of table is dangerous. The regimen should be mild and moderate, and the diet easy of digestion, but not too nutritious.

The impression of cold air on the head may be favourable to sudden passage into a heated place must be avoided : the patient should inhabit a cool situation.

All those things which, by compressing the limbs or the organs contained in cavities, may favour cerebral congestion should be rigidly proscribed. Warm as well as cold bathing should be interdicted : tepid bathing alone may be permitted although with much caution. Cold lotions to the head may be advantageous, provided we do not permit reaction to be established : at the same time pediluvia containing mustard may be prescribed. The ordinary excretions may be kept up with advantage ; but coitus M. Rostan recommends to be carefully avoided. Too violent exercise should be avoided with the same care ; violent emotions, long study, and watching, may be still more fatal. The age, strength, constitution, habits, and state of the patient, must modify these precepts.

Pharmaceutical means.—The pharmaceutical means to be employed in the first period are indicated according to the general rules of therapeutics. A suppressed eruption, hemorrhage, or habitual evacuation, may be advantageously restored : general and local blood-letting, evacuations, and revulsives, are recommended, according to circumstances, for fulfilling these indications.

In the second period the same means are also required; but the severity of the symptoms demands that they should be more energetic. If the disease appear to be of an inflammatory nature, after having combated the supposed cause, recalled a hemorrhage, discharge, eruption, &c. which may have been suppressed, the antiphlogistic treatment becomes indispensable.

General and local blood-letting, diluents, gentle laxatives, demulcents, and strict diet, should be ordered.

When the disease does not present an inflammatory character, it becomes necessary not only to enjoin abstinence from debilitating means, but from the commencement to apply rubefacients, to throw irritants into the great intestines, and to have even recourse to tonics, aromatics, internal excitants, &c. Each of the complications which have been mentioned, according to M. Rostan, will cause a variation in the mode of treatment.

Such is an analysis of the opinions of M. Rostan on the disease termed *softening of the brain*—an alteration of the encephalon to which he ascribes greater importance than has hitherto been done by pathologists: like that of many other lesions, however, the knowledge of this only assists us in our diagnosis, without adding much to our therapeutics, the improvement of which is, and very properly ought to be, our great end and aim. The work of M. Rostan is not, however, strictly confined to a detail of cases or observations on the disease in question, but contains a great variety of cases of different derangements of the encephalon, with remarks upon those derangements, which will be found of considerable interest to the pathologist. Into an analysis of these investigations our limits prevent us from at present entering; and more especially as the object with which we set out was to place before our readers some account of the disease termed *softening of the brain*, of which hitherto but a very imperfect account has appeared in the pages of this miscellany.*

We may be allowed, in conclusion, to express our feeling that in M. Rostan's volume much valuable information will be found, conveyed in a manner which is highly creditable not only to the pathological but literary qualifications of the author.

* See REPOSITORY, Vol. XV. p. 26, 112.

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

I. *The Report from the Select Committee on the State of the Penitentiary at Milbank.*

We have just now received this Report, with the minutes of evidence given before the Committee of the House of Commons, and at present it would merely direct attention to the various points of interest which it presents. The first object which will engage the attention of the medical reader, is the nature of the disease which appeared amongst the prisoners confined in that place. Whatever difference of opinion existed among those whose evidence appears in the report, we think that there cannot be much amongst those who will take a comprehensive and an unprejudiced view of the subject. We only regret that the opposite opinions of men of eminence in the Profession should go abroad in the community in a manner which cannot tend to elevate the medical character or to impress the public generally with any favourable idea of our science or of our professional ethics. We shall defer our remarks on the disease question, and on some collateral topics, until a future opportunity; but, to the medical ethics which the decision of that question—or rather the attempt at a decision—in the committee, has unhappily (for all concerns involved, we shall now only remark, that we are sorry to see the opinions and statements of men who deserve respect on many considerations treated so unceremoniously as they are in the evidence given, by some of the members of the Profession, before the Committee of the House of Commons. We are also sorry that a most able and deserving individual, who has served his country many years, in one of the most responsible offices attached to his Profession, and who, moreover, has had extensive experience in the disease which prevailed in the Penitentiary, should have been deprived, from the commencement of its prevalence, of any management of the disorder, and consequently of his office, particularly as the treatment which he recommended appears, from the evidence of the most experienced witnesses, to have been the best which could have been adopted in the disease. We cannot, indeed, refrain from concluding, from the evidence contained in the report, that Mr. Hutchison has been very, and most undeservedly, ill-treated by the leading members of the committee of the Penitentiary. He has not, and, indeed, cannot, as far as this business is concerned, be injured in the eyes of the Profession: on the contrary, we think that, as an eminent and deserving brother, who has unjustly suffered, he will find protection there.

II. *On the Therapeutical Effects of Iodine.* — By Dr. COSTER.

When reviewing, in the Archives Générales de Médecine, an Essay on Iodine, by Brera, entitled “Saggio Clineo sull’ Iodio,” Dr. Coster has offered some remarks on the successful employment of this substance, in some cases which he observed in the practice of Dr. Coindet, of Geneva. “Particular circumstances,” says Dr. Coster, “having led me to remain for eight months at Geneva, with this distinguished Practitioner, (D

Coindet,) I was enabled to observe accurately the good effects of iodine in enlargements of the thyroid gland, and in scrofulous tumours. M. Coindet first of all employed this medicine under the form of alcoholic tincture, and obtained very surprising effects from its administration in goitre. It was not long before it was perceived that iodine did not act solely on the thyroid gland, but that it diminished the form and size of the mammæ. In some imprudent patients, who, under the idea that their cure would be hastened by it, secretly exceeded the dose prescribed by the Physician, it produced a degree of irritation which induced marasmus.

"M. Coindet next tried the employment of iodine in friction on the tumour itself; and the success from the application was so great, that of nearly one hundred individuals affected with goitre, whose cases I have collected, I may affirm that more than two-thirds were completely cured by it. The hydriodate of potass incorporated with lard was the form under which the iodine was first administered in frictions.

"Soon after these successful results, the iodine was employed in scrofula, in the same manner, viz. sometimes internally, and sometimes in the form of friction. I shall not affirm that the success was as constantly favourable in this latter disease as in the former, but it is certain that scrofulous tumours yield sooner to the action of iodine than to that of any other remedy at present known. When the tumours, whether of the thyroid gland, or of the lymphatic glands, are hard, and renitent, experience proves that the effects of iodine are much more prompt, when the frictions are preceded by the application of leeches, and by submitting the patient to a demulcent regimen. Notwithstanding these precautions, however, it occasionally happens that the tumour remains stationary, although it may not be of the nature of those which are acknowledged to be incurable. A case of this kind having occurred to me, I tried the following experiment, which I merely relate here for the purpose of inducing Practitioners to repeat it.

"A young man was affected with a goitre, the size of which was, at least, equal to that of three pullets' eggs: it had been unsuccessfully treated, in the first instance by iodine in frictions, afterwards internally by the same substance, and finally by leeches, followed by fresh frictions. Some one gave me the idea of combining the action of the voltaic pile with that of the iodine, and it is known that the positive pole of the pile exercises an attractive action on iodine. From these data, I conceived that by making use of frictions with pure iodine on one side of the tumour, and applying the pole on the opposite side, the absorption would be more speedy, and the effects of the iodine on the tumour more sensible. In order, however, not to attribute to the iodine those effects which might be believed to be those of the electric action, I began by subjecting the patient, for eight successive days, sometimes to the stream of the pile, and at others to the action of sparks; but it was all in vain. I then began with the experiment. The tumour of the thyroid gland was placed twice a day, for the space of ten or twelve minutes, under the influence of the positive pole of the pile, taking care to change sides each time of using it; so that in the morning I made use of friction on the right side, and the action of the pile on the left; whilst in the evening I chose the opposite sides. At the end of four days, the size of the goitre had diminished about four lines. On the 10th day it was reduced to one-third, and at the end of twenty days there did not remain the least trace of it.

"The quantity of iodine which I employed, was two grains to a scruple of lard. During the whole of this treatment no unpleasant symptom occurred; the skin had, however, a violet tint, but this disappeared in four or five days. I regret not having been able to repeat the same experiment, as no isolated observation is sufficient to establish a fixed rule."

M. Coster considers that this plan might possibly be successfully employed in scrofulous cases; but he agrees with M. Coindet, that if the lymphatic irritation become raised to the inflammatory state, which is marked by heat and redness in the tumefied glands, the iodine quickly occasions suppuration, which in scrofulous cases it is essential to avoid, from the cicatrix which is always produced by it. Under such circumstances, he considers it prudent to abstain from the use of iodine. — *Archives G n rales de M decine, Juillet, 1823.*

III. Vegetable Alkali from Rhubarb.

M. Nani, of Milan, states that he has discovered a new vegetable alkali in rhubarb; but he has not said much of its properties, and except its solubility in weak sulphuric acid, and precipitation by lime, no evidence of an alkaline nature is offered. Six ounces of rhubarb in powder were boiled for two hours in eight pints of common water, with four drachms of sulphuric acid; this was filtered, pressed, and the residuum reboiled with six ounces of water and two drachms of sulphuric acid; the fluid being again separated, the residuum weighed but two ounces. The united infusions were mixed by degrees with three ounces of quicklime, and from being yellow they became of a blood-red colour; after standing for a day the precipitate was filtered out, dried in the sun, and weighed six ounces. It was then digested at a high heat, with four pounds of alcohol S.G. .837 for two hours, filtered, and again digested with two pounds more of alcohol, which when separated by a second filtration, was added to the first. Being put into a retort, five pounds of the alcohol were distilled off, and the rest of the liquor carefully evaporated to dryness. The residuum weighed two drachms, was of a red brown colour, with brilliant points throughout. Its taste was sharp and styptic. It was soluble in water, and its odour like that of rhubarb. This preparation is recommended in pharmacy as being a constant quality, of convenient solubility in water, and deprived of all inert and ligneous matter; one or two grains are said to be sufficient in a dose. — *Bib. Univ. xxii. p. 232, and Journal of Sciences, No. 31.*

IV. The Efficacy of Oil in Cases of Poisoning by Potass.

By M. A. CHEREAU.

Case 1st. — The grand-daughter of a copper-founder, when very thirsty drank a glassful of a solution of potass, used for scouring metals. The proportion of this alkaline solution was about sixteen ounces of red American potass to a little more than two pints of water. The liquid was of a reddish colour, which at first induced a belief that it was a mixture of wine and water, which the workmen were using; she drank it with avidity, but soon experienced great heat in the throat, with violent pains in the stomach and abdomen. M. Chereau being called in, made her take at once 10 grs of syrup of gum, and 4 lbs. of oil of sweet almonds. Vomiting supervened; and when it seemed to stop, the mixture was repeated: the vomiting after this was renewed, and the patient felt herself relieved. Emollient drinks and oleaginous potions, administered by spoonful, subsequently removed all the alarming symptoms.

Case 2d. — The child of a wine merchant had drank by mistake some of the *aqua secunda* of painters (a solution of potass in water.) Nearly 3 lbs of oil of sweet almonds were administered at two different times, and relieved the unpleasant symptoms. Vomiting occurred, as in the first instance. It was remarked in this case, that the rejected liquid was of a whitish colour, with some density, and of a saponaceous appearance. It would seem that the oil does not only act in provoking vomiting, by the nausea which it occasions, but also that it combines with potass in the stomach. — *Bulletin des Travaux de la Soci t  de Pharmacie de Paris. Juillet, 1823.*

V. *On the Use of Sugar in Cases of Poisoning by Lead.* By M. REYNARD.

The following fact has been lately addressed by M. Reynard to the *Société des Sciences* of Lisle. During the campaign of Russia several loaves of sugar had been enclosed in a chest containing some flasks of extract of lead. One of these flasks having been broken, the liquid escaped, and the sugar became impregnated with it. During the distresses of the campaign, it was necessary to have recourse to this sugar; but far from producing the fatal accidents which were expected, the sugar formed a salutary article of nourishment to those who made use of it, and gave them a degree of vigour and activity which was of the greatest service in enabling them to support the fatigues of marching. "Might not," says M. Reynard, very properly, "the employment of sugar be adopted for combating the effects of the sub-acetate of lead, instead of the other soluble salts recommended by M. Orfila, (the sulphate of soda or of magnesia,) which are not always ready at hand."—*Journal d'Agriculture et Sciences accessoires*. Par M. LIMOUSIN-LAMOTHE. Tom i. No. 4, page 94, 1823.

VI. *Clapham Retreat for the Medical Treatment and Care of the Insane and Imbecile.*

Dr. Burrows has lately fitted up, at very considerable expense, an extensive establishment for the insane at Clapham Rise, Surrey, into which persons of either sex are admitted: the house is placed on a gentle eminence, in the centre of a paddock of twenty-two acres; and it is extremely commodious and well furnished. Every resource that appears calculated to divert the morbid associations of the mind, and to conduce to health, is provided: such as books, music, bowls, billiards, carriages, &c. whilst to those who are capable of attending to more serious duties, every source of consolation will be afforded. Besides the regular visits of Dr. Burrows, the Physician to the establishment, a medical Practitioner resides in the house; but every patient, should it be preferred, will be placed under the treatment of his own medical attendant.

The views from the house, in every direction, are rich and interesting.

We had an opportunity of inspecting this establishment prior to its opening, and were highly gratified with the various arrangements. Of Dr. Burrows's qualifications, it is unnecessary for us to say much; he has already been for a considerable period Physician to an extensive private establishment, and is well known to the Profession by several interesting essays relating to insanity.

VII. *Messrs. Voisin and Falret's Establishment for the Treatment of the Insane of both Sexes, at Vanvres, near Paris.*

We have also had an opportunity, within the last few months, through the kindness of Messrs. Voisin and Falret, of visiting their private establishment, lately fitted up at an expense of £10,000, on the model of the beautiful establishment of M. Esquirol, at Vanvres, near Paris. The house is amazingly large and commodious, and every thing that could give the appearance of restraint, both in the house and grounds, carefully avoided: the gardens are laid out in the English style, and are inclosed with strong trellis-work, so concealed by shrubs, that no appearance of objects of constraint is perceptible: attached to the garden is an extensive inclosure, where the convalescents may indulge in the pleasures of agriculture and exercise. Every thing around the afflicted objects is contrived so as to induce tranquillity of mind. Messrs. Voisin and Falret are pupils of M. Esquirol, and have published several important essays on mental alienation. We trust they may meet with that encouragement from their countrymen to which their mental qualities so richly entitle them.

subsequent meeting.

4. *Resolved*, That Mr. Thomas Wilford be requested to be Secretary to this Society (*pro tempore*), and that he be printed summons to attend the next Meeting to each become a Subscriber.

5. *Resolved*, That an Annual Subscription of Two shillings be advanced by every Member of this Society.

6. *Resolved*, That those gentlemen present who are Members of this Society, do now send their names to be enrolled.

7. *Resolved*, That a Committee of three Members be appointed in conjunction with the Secretary, to draw up an account of the proceedings this evening.

8. *Resolved*, That scientific men throughout the United Kingdom be solicited to co-operate with this Society, and to transmit their observations to it; and that this Society will always be ready to receive observations from the cultivators of science throughout the globe.

9. *Resolved*, That no other qualification be required for admission to this Society, than a desire to promote the science of Natural History.

10. *Resolved*, That after the next Meeting the election of Members be by the proposition of three, and that a majority of Members be necessary to elect.

11. *Resolved*, That this Meeting do adjourn to the next, to meet at the same place and hour.

MONTHLY MEDICAL BIBLIOGRAPHY

BRITISH.

A System of Anatomical Plates; accompanied by Descriptions and Physiological and Pathological Observations. By J. LIZARS, F.R.S. Fellow of the Royal College of Surgeons. Part I. On Anatomy and Physiology, Edinburgh and London, 1823. Part II. The Blood-vessels and Nerves. Edinburgh and London, 1823.

This is a very splendid and an uncommonly cheap work.

FOREIGN.

Clinique Médicale, ou Choix d'Observations recueillies à la Clinique de M. Lermnier, Médecin de l'Hôpital de la Charité, &c. &c. et publiées sous ses Yeux. Par G. Andral, fils, D.M. de la Faculté de Paris, Membre adjoint de l'Académie Royale de Médecine, &c. &c. Première Partie, Fièvres. 8vo. Pp. 536. Paris, 1823.

M. Andral is already well known to our readers as an able pathologist. The present work contains about 120 cases of continued fever, with a detailed account of the appearances observed on dissection of those which proved fatal. M. Andral has also noticed upwards of fifty cases which were treated by M. Lermnier. After detailing, very circumstantially, the history of those cases, he takes a very interesting review of the particular phenomena which they presented, and arranges their characteristic features under separate heads. This work will excite the interest of those who study the nature and treatment of fever; and who, that wishes to attain real professional eminence, would not direct a very large portion of his attention to this subject?

WORKS RECEIVED FOR REVIEW.

I. Transactions of the Associated Apothecaries and Surgeon-Apothecaries of England and Wales. Vol. I. 8vo. Pp. clxx, 424, with Plates. Burgess and Hill. London, 1823.

II. A Practical Treatise on Tropical Dysentery, more particularly as it occurs in the East Indies; illustrated by Cases and Appearances on Dissection: to which are added, Practical Treatises on Scorbutic Dysentery, on the Morbus Chylopoieticus and Gastrodynia à Fame; with some Facts and Observations relative to Scurvy in general, and a short Account of the Scorbutic Disease that appeared at the Penitentiary, Milbank, Westminster. By R. W. Bampffield, Esq. Surgeon, one of the Surgeons to the Royal Metropolitan Infirmary for Diseases of Children, &c. &c. 8vo. Pp. 344. Longman and Co. London, 1823.

III. A Course of Lectures on Chemical Science, as delivered at the Surrey Institution. By Goldsworthy Gurney. 8vo. Pp. 310, with Plates. Whittakers. London, 1823.

IV. A Treatise on Midwifery; developing New Principles, which tend materially to lessen the Sufferings of the Patient, and shorten the Duration of Labour. The Second Edition, considerably improved, and illustrated with numerous Cases; comprising, also, additional Observations on Premature Expulsion of the Ovum, and Retention of the Placenta. By John Power, M.D. Physician-Accoucheur to the New Westminster Lying-in Charity, &c. &c. and Lecturer on Midwifery and the Diseases of Women and Children, &c. 8vo. Pp. 240. Simpkin and Marshall. London, 1823.

NOTICE OF LECTURES.

Dr. Gordon Smith will commence, early in January, a Course of Lectures on Medical Jurisprudence, &c. For particulars apply at the Publishers'.

LITERARY INTELLIGENCE.

Preparing for publication, a Treatise on Organic Chemistry; containing the Analyses of Animal and Vegetable Substances, founded on the Work of Professor Gmelin on the same subject. By Mr. Dunglison, Member of several Learned Societies Foreign and Domestic, and one of the Editors of the Medical Repository.

Dr. Henderson's History of Ancient and Modern Wines will shortly appear in an elegant 4to volume, embellished with decorative Wood-cuts.

Dr. Prout is preparing a volume of "Observations on the Functions of the Digestive Organs, especially those of the Stomach and Liver."

THE METEOROLOGICAL JOURNAL,

From the 19th of SEPTEMBER to the 20th of OCTOBER, 1881.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50, High Holborn.

Sept.	Moon.	Rain Gauge.	Therm.			Barom.		De Luc's Hygrom.		Winds.		Atmo. Vap.			
			9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.		
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7			55	59	43	29	75	29	97	80	77	SSW	WSW	—	Fine
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9			50	54	43	29	44	29	48	85	80	SW	SW	Rain	—
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The quantity of Rain fallen in the month of September was 62·1000

NOTICE TO CORRESPONDENTS.

Mr. Ridge's Case of Somnambulism is received through Dr. J. Johnson.

Communications are requested to be addressed (post paid)
Messrs. T. and G. UNDERWOOD, 32, Fleet Street.

THE
LONDON MEDICAL
REPOSITORY.

No. 120. DECEMBER 1, 1823. VOL. XX.

PART I.

ORIGINAL COMMUNICATIONS.

I.

A General Report of the Medical Diseases treated in the Kent and Canterbury Hospital, from January 1st to July 1st, 1823, with a particular Account of the more important Cases. By HARRY WILLIAM CARTER, M.D. F.R.S. Ed. Senior Physician to that Institution, &c. &c.

(Concluded from page 402.)

No. VIII. *Case of Menorrhagia alternating with Leucorrhœa.*

MARY CHEESMAN, aged twenty-four, single, was admitted, April 25th, with menorrhagia. She had been ill nine months, and had been under the care of a very judicious Practitioner in this neighbourhood, who had examined the patient, and found no disease of the uterus. She was first bled to the amount of twelve ounces, and took inf. rosæ with tinct. digitalis. The blood exhibited no marks whatever of inflammatory action going on. She afterwards took astringents and tonics without the least advantage. The complaint had seldom left her for the nine months, and whenever it had ceased for a moment, profuse leucorrhœa had taken its place. May 5th, she began the cubebs, a scruple three times a day in mist. camph., and was allowed three glasses of port wine daily. On the 10th, as she complained of pain of the hypo-

gastric region, six leeches were applied, which afforded marked relief; she also took a purgative draught. Menorrhagia did not return, and the leucorrhœa gradually subsided. Leeches, to the number of eight, were applied on the 18th, and from that date till the day she was discharged, viz. June 16th, she continued free, or very nearly free, from complaint. I flattered myself that the local bleeding and the cubebs had effected a cure; but,

“O curas hominum! O quantum est in rebus inane!”

almost as soon as she reached home, the complaint returned as bad as ever. It would appear, then, that the exemption from it which she enjoyed in the hospital was owing to rest and good nourishment chiefly. The medicine, perhaps, of some avail; and had the patient been in affluent circumstances, it might have had the exclusive credit of the cure. Since, after discontinuing its use, she might still have remained quiet, might have lived generously, and thus have escaped recurrence of the disease.

The event of the case disappointed me not a little, though the experience has, by this time, taught me not to be sanguine in my hopes of removing affections of this nature after they have subsisted for months. They generally depend upon some organic disease of the uterus, although, as was the case in the present instance, no disease can be detected by examination.

No. IX. *Case of Chronic, perhaps Organic, Disorder of the Stomach.*

Among the cases of chronic affection of the digestive organs, the following seems not destitute of interest. S. Swan, ætatis eighteen, single, was admitted into the hospital November 16th, 1822. The medical gentleman, under whose care she had previously been, suspected scirrhus of the pylorus.

The patient was a very slight delicate person. Her person was extremely feeble and small. The colour of her face indicated extraordinary languor of circulation. She was by any means, pale, but her complexion was purple. Her extremities were always cold. Her tongue was much furrowed. Appetite bad, and every kind of animal food was rejected soon after being taken. There was also incessant spitting and a frothy darkish-coloured mucus was thrown up in considerable quantities. She complained of great pain at the scrobiculus cordis, shooting to the back, and there was a decided tenderness upon pressure of the epigastrium. Her respiration was short, especially after taking food, with

always lay as a load upon the stomach. Catamenia suppressed for several months. Various remedies were tried. Among the rest, bleeding by leeches, tartar emetic ointment, mercurial ointment, blue pill, with extract. conii, &c. &c.; and, in some respects, the patient certainly improved. The spitting ceased, and the local pain was relieved. Still, however, food continued to be rejected, the menses were not restored, and great general debility remained. She was made an out-patient, and returned to her situation as servant to Lady Harris. From time to time I heard of her, but the reports were never favourable. At length (it was, I think, about the end of June), I prescribed five grains of the oxyd of bismuth with a third of a grain of opium, and fifteen grains of compound tragacanth powder, thrice a day.

I saw her July 15th, and she was then, though not recovered, considerably better. The symptoms of organic disease of the stomach had become less urgent; the menses had returned, and her general appearance was more favourable. I cannot say but I still apprehend organic lesion of this viscus, for animal food is still rejected, and there exists some pain. It seems evident, however, that the oxyd of bismuth and opium have done good. The disease appears to have been checked in this instance, and I think I have found it useful in other cases, where I have had strong grounds for suspecting more than functional derangement of the stomach.

Nos. X. and XI. *Cases of Pyrosis.*

In the two following cases the good effects of the oxyd of bismuth were conspicuous.

No. X. — Mary Nichols, ætatis fifty-three, was made out-patient January 17th. She stated that she had suffered for *several years* from water-brash, for which she had taken, at different times, a variety of remedies, without much relief. The fluid rejected was limpid, and nearly colourless: its taste somewhat acid. The pyrosis was her chief complaint, but she had many distressing dyspeptic symptoms besides, such as occasional severe gastrodynia, &c. Her pulse was feeble; tongue foul; bowels disposed to be costive. I prescribed oxydi bismuthi, gr. v., pulv. tragacanth. c. gr. xv. ter die.

24th. — Pyrosis much less. — Pergat.

February 7th. — Only one return of vomiting since the last report, and that return was this morning. She ascribed it to fatigue in waiting at the hospital. Augetur oxyd. bismuth. ad gr. viij. As she complained of severe heart-burn at

times, I ordered the following draught to be taken pro matâ : —

R Magnes. 3ss.; Tinct. Opii, ℥jv.; Aq. Piment.; Aquæ Pe-
 āā 3ijj. Misce, fiat haustu^s.

21st. — Much improved. Complains only of costiveness

R Hydrarg. Submur. gr. ij.; Pulv. Antim. gr. iij.; Extr.
 Hyoscy. gr. iij. Misce, ft. pil. ij. hac nocte sumend. et ha
 laxativ. cras mane.

On the 7th March she reported herself still greatly be-
 of the pyrosis, and her general health was materially
 proved. Still, however, there was a tendency to costiveness
 which the draught with tinct. opii seemed to increase, and
 was compelled again to order the calomel, &c.

April 15th. — Pyrosis entirely gone. She now took
 laxative pills twice a week, and continued the oxyd
 bismuth.

May 16th. — No return of pyrosis. Discharged.

No. XI. — Susanna Carey, æt. fifty-seven, admitted Ma-
 25th. This woman had, for a very long period, been suf-
 ing from pyrosis. She took the oxyd of bismuth thrice a d
 and the following powder every day at noon : —

R Pulv. Rhei, gr. v.; Sodæ Subcarb. Exsiccat. ʒss.; P
 Cinnam. c. gr. iij. Misce, ft. pulvis, ex quovis vehiculo ido
 sumendus.

The patient quickly became so much better, that s
 ceased to attend, and I sent for her to learn what had be
 the effect of the remedy. She reported herself, June 13
 nearly free from her complaint.

No. XII. *Case of Scrofulous Enlargement of the Mamme*

Susan Mutton, ætatis twenty-three. This poor girl h
 long been a patient of the hospital for a complication
 disorders, some of which have, from time to time, be
 relieved, but they have generally either returned or be
 succeeded by fresh ailments. She is of decidedly strum
 temperament, and her mother, I believe, died of scrofula
 the hospital some years ago. I scarcely know what reme
 have not been exhibited in the present case. The great c
 stitutional debility under which the patient labours
 rendered every modification of tonic medicine, and every s
 of diet, of little avail. One of her chief diseases is gene
 enlargement of both mammæ, and it is on account of t
 enlargement that her case is noticed here. This g
 increase of volume of the breasts, rendering them quit
 burden to the female in whom it occurs, I have hith

found to bid defiance to every mode of treatment. Conversing one day with a very intelligent Practitioner of this neighbourhood on the effects of iodine on the lymphatic system, I was asked by that gentleman whether I had noticed a somewhat unpleasant circumstance respecting it, viz. that while it absorbed the morbid growth, bronchocele for instance, for which its employment had been directed, it also absorbed the *mammæ* of the patient? This effect I certainly had not remarked, nor was I at the time aware that Professor Brera had noticed it.* Whether my friend had met with M. Brera's essay, or had read the abstract of his clinical observations respecting it, contained in the *Medico-Chirurgical Review* for March last, I cannot say; but the question he put to me led me to imagine that iodine might be usefully applied in cases such as that of Susan Mutton.†

At first I prescribed it externally alone. This was about the beginning of July, and I thought that, after the lapse of a fortnight, the left *mamma*, to which only the ointment had been applied, was somewhat diminished in volume. Not long after this I ordered ten drops of the tincture thrice a day, but soon discontinued its use, for it caused severe pain of the stomach and bowels. The patient still perseveres with the ointment to both breasts (August 29th). I certainly think it has reduced their enormous size, but as yet it has not had a fair trial. I shall give the sequel of the case in my next report.

No. XIII. *Case of Amenorrhœa.*

Elizabeth Attwood, ætatis twenty, was made out-patient

* Professor Brera says, "in some persons the submaxillary glands become painful and swollen, and a similar state of the *mammæ*, with *eventual diminution of their natural volume*, takes place in some females." I quote from Dr. Johnson's abstract, for I have not the original essay before me.

† Dr. Coindet, to be sure, has exhibited iodine in cases of enlarged glands of the breast; and Dr. Baron (in his "*Illustrations of the Inquiry respecting Tuberculous Diseases*," chap. vi. entitled, "*Remarks upon the Treatment of Tuberculous Diseases*," p. 223), when closing the sketch of a case, which he denominates *physconia hydatidosa*, and which was much benefitted by the iodine, has the following words:—"A small tumour has recently appeared in the left *mamma*;" and he adds, in a note, "It is of importance to observe, that this tumour has, by the continued use of the remedy, been nearly absorbed." But these tumours are very different from that general augmentation of volume of the *mammæ* at present under consideration.

April 25th. She had symptoms of incipient phthisis, was very apprehensive that she would become decidedly sumptive. The catamenia had been suppressed for 3 months. There was this hope, viz. that the cough might be symptomatic, instead of the suppression being so. The patient was first bled to f. 3x.: the blood was co and buffy. She was ordered inf. rosæ, with a small ad of acid, and tinct. card c. every four hours; a demu saline draught, with tinct. of digitalis, m̄vj. at bed-t and, as the bowels were rather torpid, an ounce and a h decoct. aloes c. every, or every other morning. In weeks the more threatening symptoms of disease of the had subsided, and the case was proved to be one of pressed catamenia only. She was now directed to con her night medicine, and the decoct. aloes c., and to gr. viij. of the pil. galban. c. thrice a day.

On the 30th of May she continued nearly as before. compound galbanum pills were changed for gr. x. of pil. cum myrrhâ. In about a week the menstrual discharge restored, and it returned at the proper time in July. On 11th of that month she was discharged cured.

I have given the above brief history because it affords a good example how intimately suppression of menses sometimes resembles phthisis. It often, indeed, seems to lay the foundation for that fatal malady. The suppression has continued for a long period, the general health suffers materially, and ultimately the lungs become diseased, and the patient dies consumptive. Such, perhaps, would have been the event of the case before us, had not the patient applied for relief before her constitution had begun to give way, had not the means resorted to for restoring the menstrual discharge fortunately proved successful.

No. XIV. *Case of Rheumatism, &c.*

The second case of which I have given an abstract in my report affords an example of the good effects of the ta emetic ointment in an affection of the head. The benefit, however, which resulted from its use in that case, though was, I think, very evident, was by no means so decisive as the following instance, where it was applied for an extremely painful and obstinate affection of the hand and arm.

Rebecca Tompset, ætatis nineteen, was admitted into hospital October 25th, 1822, affected by swelling, inflammation, excessive pain, and tenderness of the right hand and arm. Her general health seemed to be little affected. I first suspected, from the appearance of the affected li-

hat it had sustained some mechanical injury, or that it had been sprained; but the patient assured me that such was not the case. I therefore treated the disease as rheumatism, but to no purpose: it remained obstinately fixed to the old spot, and became even more severe. Then, deeming it a scrofulous affection, I directed my views principally to the improvement of the general health, using, at the same time, various local remedies — but all failed *in toto*. Decoct. sarsæ. c. pil. hydrarg. and extract. conii, laxatives, and many more general remedies, leeches, blisters, lotions, ung. hydrarg. were equally of no avail. At one time so much symptomatic fever was excited by the excessive pain, that I was obliged to bleed to the amount of sixteen ounces. After three months the patient was not at all better, and I kept her in the hospital rather out of charity, for she was destitute of a home and miserably poor, than because I entertained hopes of removing her complaint. At last, however, I determined upon making trial of the tartar emetic ointment, and in this determination I was influenced by my friend Mr. Hutchinson, of Hythe, who one day happened to go round the hospital with me. It may seem rather extraordinary that I should not have thought of using this remedy before. In fact, it had occurred to me, but I felt reluctant to employ it on account of the inflammation always present, and because I feared lest, in such a temperament, the sores should prove troublesome and difficult to heal. The ointment was commenced about the beginning of February. It was diligently employed, and so as to produce its full effects. The pustules were numerous, and assumed their usual malignant character. The event was most satisfactory, and the patient left the hospital with the hand and arm free from pain, or inflammation, or swelling, and nearly as serviceable as the other. She was discharged in February, and since that period I have heard nothing of her; so that it may be concluded that she continues free from complaint.

No. XV. Case of Organic Disease of the Heart.

In the following case again the tartar emetic ointment seemed, in conjunction with other remedies, to be very useful.

Samuel Hubbard, ætatis forty-five, labourer, was admitted into the hospital, April 25th, with the following symptoms:— Violent and constant palpitation of the heart, perceptible to the eye, with pain, referred chiefly to the scrobiculus cordis, but extending also over the chest generally, and affecting the left arm. Respiration always hurried, and excessively so

upon the least exertion. Dry, hard, deep, and incessant cough, which was rendered more urgent and distressing by exposure to cool air, on which account the patient generally held a handkerchief to his mouth. Pulse rather hard, but not full or strong, nor do I recollect that it intermitted. Sleep disturbed. There were no symptoms of dropsical effusion. The patient had for a long time laboured under a disease, which evidently appeared to be disease of the heart, and had once before been in the hospital, but not under my care, stated that he was then relieved by bleeding. All that could be hoped for in such a case was that symptoms might be palliated. The pain and distress in breathing were so great when I saw him on the day after his admission, that I thought it right to order bleeding to the extent of twenty ounces, and I prescribed the following powders to be taken three times a day:—

R Pulv. Digital. gr. ss.; Antim. Tart. gr. $\frac{1}{2}$; Pulv. Colchici gr. $\frac{1}{2}$.
Misce, fiat pulvis.

28th.—The first portion of blood, sixteen ounces, was somewhat cupped and very firm, but it exhibited no clots. The remaining four ounces, which were in a separate vessel, were buffy. This I have frequently observed. No relief followed the bleeding. All the symptoms continued nearly the same. His bowels being confined, I ordered a powder, composed of five grains of calomel and five grains of jalap; and directed the tartar emetic ointment to be rubbed on the left side twice a day.

May 5th.—There was little alteration; the painful harassing cough continued. The ointment had not produced much effect. On the 12th, however, there was a very copious eruption, extending far beyond the space in which the ointment had been used, and the discharge from the pustules was considerable. The powders of digitalis had now affected his bowels, and they were very much relaxed. All the symptoms were materially relieved. The powders were continued twice a day. The irritation caused by the eruption was soothed by fomentations and poultices, and the discharge was maintained by the occasional application of the ointment spread on linen.

By the 26th the patient was much improved—much better indeed, than I ever supposed he could be. He was able to move about without distress, and to assist, with other convalescents, in the work of the house. He was made a patient, and was strictly enjoined not to engage in any work. The discharge he was directed to keep up by

antimonial ointment,* or by ung. lyttæ, with a small addition of tartarized antimony, and the powders were still to be taken twice a day.

I have not seen the patient since he left the hospital.

No. XVI. *Case of Abscess of the Liver, with Tubercles in the Lungs.*

James Miles, ætatis twenty-four, was admitted, April 11th, with symptoms of phthisis pulmonalis and of hepatitis. He had severe cough with purulent expectoration; night perspirations; frequent and very feeble pulse; pain of chest; great difficulty of breathing. There were excessive pain, and tenderness, and fulness, about the region of the liver,—pain also of the right shoulder and arm. His lower extremities were anasarcaous; his debility was remarkable. The pain and tenderness of the right side were such, that I should certainly have bled him from the arm could he have borne it. As it was, I applied ten leeches to the side, and afterwards a blister. On the 19th the leeches were repeated; and again on the 22d, the pain and difficulty of breathing, &c. still subsisting, eight more leeches were applied and a second blister. May 1st, a third blister was laid on the affected part. The cough and other symptoms of disease of the lungs continued so urgent as to require demulcents with opiates to keep them in check. I tried also the prussic acid, but it did no good. The anasarca of the legs, which added greatly to his distress, was relieved several times by acupuncturation. He was for a long time affected by obstinate diarrhœa, and some apparently purulent matter was passed by stool. This diarrhœa reduced the patient to such a degree, that, notwithstanding the inflammatory symptoms still present, I was fain to employ astringents with opium, and to order port wine and generous diet. Towards the end of June the diarrhœa had ceased in a great measure. The pectoral symptoms were nearly the same, but the state of the liver still attracted our chief attention. Blue pill with opium every night, and mercurial ointment, seemed, for a little while, to arrest the progress of the disease; but their good effects were transient, and towards the end of June the

* The formula I generally adopt is that recommended by the late Dr. Jenner, viz.:—

R Antim. Tart. (Subtil. Pulv.) ʒij.

Ung. Cetacei, ʒjx.

Sacch. Albi, ʒij.

Hydrarg. Sulphuret. Rubri, gr. v. M. ft. Ung.

patient became much worse: the diarrhoea recurred defied every effort to suppress it: general dropsy came on, and, after lingering till July 8th, he died.

Examination of the body.—As the principal disease was to have existed in the liver, that viscus was first examined. It was enlarged to at least three times its natural size, extended quite across the epigastric region to the left chondrium. Its left lobe exhibited marks of inflammation but was not disorganized. Its right lobe was, as it were, converted into two sacs containing pus. The larger sac between three and four pints. The other abdominal viscera were generally healthy, but their position was considerably deranged by the enlarged liver. In the thorax the lungs were compressed by the same, and the right lung was more extensively diseased. It was tuberculated throughout, and some of the tubercles had advanced to a state of suppuration.

This may be regarded as rather an uncommon case. Abscesses of the liver are not often met with in this country, and more especially are they rare in persons who have been out of England. With the history of the case I was previously to the patient's being admitted into the hospital but slightly acquainted. He had, however, been long in a bad state of health, often unable to do his work, though very willing to exert himself. When he first came under observation, disease had committed such ravages upon his constitution, that scarcely any prospect remained of his being relieved by medicine.

No. XVII. *Case of Hemoptysis.*

Sarah Harrison, ætatis fourteen, was made out-patient 22d, 1822. She had been in the hospital at the beginning of the year, with what I at first considered hæmatemesis; but was soon, however, ascertained that the blood came from the chest, and the girl was at that time relieved by blistering, leeches, &c. Soon after she was discharged, she returned, and she was made an out-patient under my colleague, Dr. Packe. She again got better, and then relapsed. Upon her readmission, I found that she was extremely annoyed by ascarides, which were got rid of by means of soda taken internally, and aloetic suppositories. Still hæmoptoe continued. Her health did not materially improve, yet she appeared generally weak. I prescribed mist. c. ʒj. ter die, and the tartar emetic ointment to the chest. As her bowels were slow, an ounce of the compound decoction of aloes was ordered to be taken every other morning, and twice a week she had a grain of calomel, with five grains of rhubarb, and a little compound cinnamon powder.

antimonial ointment, however, was not effectually employed till some weeks after it was first directed to be used. The patient lived at a distance from Canterbury, and I seldom saw her. The bleeding continued, and it was not until the middle of February that I ascertained the ointment had been only occasionally used, and had been laid aside as soon as the eruption had begun to appear. The mother was now strictly enjoined to employ the remedy regularly, so as to maintain a constant discharge. The *mist. ferri c.* was also continued.

Mrs. Harrison attended to the directions that had been given her, and by the beginning of March the hæmoptoe had subsided. A discharge was kept up for about three months, and the disease did not return. For several weeks previous to the girl's being discharged, the ointment was omitted, and, June 13th, she was dismissed as cured. It is to be observed that the catamenia had not appeared. Does not the event of this case afford an additional proof of the efficacy of *tasar emetic* as an external application?

No. XVIII. *On Acupuncture.*

In my abstract of the case No. V. it was mentioned how efficacious and how safe I had found acupuncture in instances of *anasarca*. I may now add, that I have known it also useful in some cases of chronic rheumatic affection. Isaac Terry, who was troubled with *sciatica*, underwent this operation, and the relief which it afforded him, though unfortunately not permanent, was striking. The needles were passed May 9th—the pain was almost immediately removed, and stiffness only of the affected part remained. The patient walked four miles with ease. The pain, however, returned on the 15th. The operation was repeated once and again, and both times with marked relief. The relief, however, as I have before stated, was not permanent; perhaps owing to the man's living exposed to cold and wet; and being obliged to work very hard. He afterwards, however, got nearly well by means of the warm bath and *colchicum*.

Another patient, Mary Pattison, a middle-aged woman, had been long suffering from rheumatic pain of the arm and hand. A variety of remedies had been tried, but to no purpose. Acupuncture was here of decided efficacy. It certainly removed the pains from the part to which it was first applied; and the patient, at her own earnest request, had the needles passed into the hand and fingers several times, and, if her statement is to be credited, the operation put the disease to flight. She was discharged some time back, and I have not heard of her since.

I have employed acupuncture sometimes with considerable success, more often without benefit to the patient; however, I am inclined to look upon it with attention. Discrimination, as M. says, is necessary in employing it, and it is occasionally resorted to it in cases to which it is adapted. When a novel remedy is proposed, we are prone to exhibit it without

No. XIX. *On the Ba*

The cases of chronic affection of the lungs to which I could assign no other cause than general debility, were of course the most common. Every hospital they constitute a class of diseases we have to treat; and to every hospital Physician must be applied. Speaking, the patients quit the hospital, and return to their hard work, bad living, or irregular habits, and back again. Medicine does sometimes alter the stances and habits of the patients, but it has done. It may, however, be said that, among other remedies which are applied to dyspepsia and general debility, the use of this is of some consideration. Every one who has once enjoyed no small share of reputation for these articles besides of the materia medica, has been overrated, or which have been lately it seems, of late years, to have fallen into disrepute. In phthisis, I have no doubt, it is of some success attending its exhibition, but it has thrown discredit upon it altogether. I remember, that, as Dr. Paris says in his *Methodologia*, "it is stimulant and tonic," and adds, that therefore, "in certain cases of the lungs, it has been found a serviceable remedy." It is contended that it is serviceable not only in the affections of the lungs, but in many other affections. Lemery says that the balsam "strengthens the nerves." Lewis, in his *Methodologia*, mentions that "its principle is to strengthen the habit, and to strengthen the nervous system, and to suppress the viscid humours. Hence its use in gonorrhœas, dysenteries, suppression of urine, charge, and other disorders proceeding from a sluggishness and inactivity of the system."

I have frequently had recourse

(especially where the patients complained of sinking at the stomach, faintness, sensation of emptiness, and craving without appetite, and other symptoms indicative of a broken-down constitution) after various other tonic and cordial medicines had been made trial of in vain, or with very little advantage; and, febrile excitement being absent, and there existing no signs of inflammation or congestion in any quarter, I scarcely know of a remedy which I have found more efficacious. In the cases to which I allude, it is singularly grateful to the stomach. As Lewis has said, "it warms the habit" — it imparts to the enfeebled frame a vigour which other remedies are unable to supply. In a word, the Peruvian balsam appears to me to merit more attention than is commonly bestowed upon it at the present day. I would strongly recommend it in dyspepsia and general debility, and particularly would I recommend it in cases of females whose constitutions have been broken down by frequent child-bearing and hard labour, and in the universal weakness which is the lot of advanced age.

I have usually exhibited the balsam of Peru made into pills with powder of myrrh, giving from six to eight grains of the mass thrice a day. Sometimes I have prescribed it in tincture, according to the old Edinburgh formula for the *tinctura balsamica*, combined with other tonic and cordial medicines.

I here close this very imperfect report. That for the remainder of the present year I mean to take in hand immediately. How soon I may be able to bring it to a conclusion my various other occupations render it impossible for me to say, and whether I shall claim for it the indulgence of the public, must, of course, depend upon the judgment which may be pronounced upon the essay which now appears before its tribunal.

Canterbury, October 15th, 1823.

II.

On the Use of Digitalis Purpurea in Pulmonary Disease, with Cases and Observations. By T. W. WANSBROUGH, Esq. Fulham, Member of the Royal College of Surgeons.

I do not presume to flatter myself that the medicinal vegetable, on which I am about to treat, will receive a more permanent rank than it formerly enjoyed as an important remedy in phthisis pulmonalis through the humble instrumentality of my individual observations or suggestions, yet I shall be flattered by the event, should Practitioners arrive at

any of my conclusions by the evidence of practical trial; and I cherish the hope that, viewing it as a means of curing the disorders of the lungs, its operation will eventually be freed from the obscurity and scepticism in which it is now involved.

The cases which I am about to adduce are intended to convey a clear and circumstantial view of the mode of action and of the digitalis purpurea, both in form of tincture and infusion, in pulmonary disease. I wish to show, by the regular and precise manner in which the cases are detailed, that, in all affections of the lungs, the investing membranes of an inflammatory nature, the digitalis is a very valuable—indeed, an inestimable remedy. I mean to say I have found it so; yet it has failed in the earlier instances of my practice, where, from enthusiasm, I saw not the difficulties which attend the perfect development of its operation; but subsequent observation and experience have enabled me to perceive the obstacles to success which are evinced by symptoms, and to remedy the defect by removing the barriers that obstructed my progress. The result of my experience I offer to the indulgence of the Profession, in the expectation that the remedy in question may receive that attention it deserves, and be prescribed to an extent that may justify its appropriate operation on the system.

The action of the digitalis on the circulation I have explained, as I conceive it to be, in the 16th Volume of the *REPOSITORY*, page 23, as also its effects in diminishing morbidly-increased action in the extremities of the pulmonary vessels, thereby cutting off the sole source and cause of hæmorrhægia, which, when once effected, the disease ceases to exist. The action of digitalis can be said to have taken place only in cases of incipient vomica and tubercular disease, before that extensive destruction of the substance of the lung takes place, from the peculiar idiosyncrasy of the patient, the predisposing cause being constitutional or hereditary, or the union of several vomica, which places the patient beyond the power of human art. In those melancholy cases of advanced disease, digitalis can be of no service; yet, in the arrested progress of incipient ulceration of the lung, by its means, I feel bold to say, that its exhibition requires promptness and vigour on the part of the Practitioner to ensure success from it in the earlier stages of the disease.

Of the various divisions of pneumonia, I would here submit, for the better elucidation of my views, the addition of two species only of the genus, viz. pleuritis and pneumonia. By the former I would indicate inflammation

the pleura, and by the latter of the substance of the lungs: as, however, in every case of inflammation of investing tissues, the included organ is always sympathetically affected, and if the acute symptoms be not speedily removed, the inflammation extends to the structure of the organ itself from its investing membrane, so I consider that both forms of pneumonia may be coexistent. In inflammation of the pleura costalis and pulmonalis extending to the substance of the lungs, the affection thus becomes compound; but in both cases the treatment is the same during the acute stage: in fact, it matters not whether the disease be peripneumonia, or simply pleuritis, or both conjoined. The primary indications of cure are the same, and the treatment must be similar in many cases during the active stages of the disease at least.

The terminations of inflammation occurring in the structure of the lungs, and in the pleura, should be always kept in mind, and should influence our practice, especially in the progress of the disease. We know that inflammation of the structure of the lungs more readily ends in suppuration and effusion, than inflammatory action of the pleura; in the former, also, we have sanguineous effusion as a frequent consequence.

It is not always in the power of the medical Practitioner to procure a fortunate termination of the inflammatory action of the pulmonary structures by the lancet and antiphlogistic regimen: the morbid action frequently continues, and runs on into its next stage before he can arrest diseased impetus of the circulation in the capillaries of the organ, or avert the consequences of such morbid action, which is organic lesion. Indeed, the more frequent terminations of inflammation in the structure of the lungs, viz. effusion and suppuration, are occasionally hastened, in some constitutions, by blood-letting being carried too far, or relied on alone, to the neglect of other means. It is in this stage of the disease that I would call the attention of Practitioners to the efficacy of digitalis. It is here, after having arrested the action of the heart and arteries, that a remedy is required to prevent the recurrence of these symptoms, and to act specifically and permanently on the capillary system of vessels: it is here that I have experienced the decided efficacy of digitalis in subduing inflammatory action, and in preventing its recurrence. By thus keeping down the symptoms to the point obtained by the lancet, I have gained upon the disease, and ultimately put a stop to its devastating influence, without the consequences to which it otherwise would have inevitably led. It is only, however, by a prompt and vigorous exhibition of the digitalis, that this desirable end can be attained; and it is in all such

cases, when thus administered, that digitalis has proved an inestimable auxiliary to depletion; and in such it can be too earnestly recommended.

In cases of high excitement during the attack of pneumonia, after unloading the vessels, I have been in the habit of giving both the tincture and the infusion; but where the case is critical, from the urgency of symptoms, I prefer the latter. To children from ten to fifteen years of age I give half an ounce of this every six hours; and by watching the case closely and attentively, the result will soon appear either the pulse will rise, showing the medicine of no effect or it will remain stationary, although it preserve its inflammatory character. It has happened in my practice that the tincture and the infusion have both failed; but even their failure is only a certain criterion of severe inflammatory action, not of the medicine's inefficacy. Whenever the symptoms have increased whilst exhibiting digitalis, subsequent blood-letting, I have found it an invariable indication that the sthenic diathesis still existed, rendering the remedy useful and upon farther reduction of the inflammatory action by lancet, the subsequent administration of the digitalis proved decidedly successful; and in no one instance has it failed to answer my expectations whenever the pulse is diminished, as in the case of Master Morice. In that instance recovery was conspicuously rapid after I had produced an intermittent pulse by the action of digitalis. There appears to me, then, to be in this vegetable some peculiar property which can be exerted only during certain states of the sanguiferous system, and where these states do not exist, its virtue is unavailing; yet that they are to be detected, I am convinced by the result of my experience: but this can be done only by a close and attentive observation of symptoms and by administering the digitalis after each bleeding, continuing or increasing the dose, as circumstances may require.

Where inflammation of the structure of the lungs, already formed tubercles, of the mucous surfaces, or of the serous coverings, either of an acute or chronic character, gone on to suppuration or ulceration, the use of digitalis is of great service; the necessity of its prompt exhibition having, however, ceased in the subsidence of the primary and urgent symptoms. When a small portion only of the lungs is involved in the disease, the powers of the constitution are occasionally sufficient to restore the parts, by ridding them of the morbid secretion; but this must not be trusted to. The digitalis should be employed, for it arrests the morbid action of the vessels whence the secretion is derived, and

consequently, diminishes the quantity of matter. It sometimes happens, when the formation of matter is commencing, that digitalis has no effect on the symptoms, the disease goes on uninterruptedly, and the patient expectorates pus, which increases in quantity. In those cases there is corresponding inflammatory action of the vessels themselves, which must be reduced by blood-letting, until the intermittent pulse be produced by the digitalis on its subsequent exhibition. It is plain, therefore, that the digitalis is to be given where inflammatory action is going on, after blood-letting has been properly employed, and either before or subsequent to the existence of suppuration; and that the propriety of further depletion is, in a great measure, indicated by the failure of the remedy to produce its specific effect upon the system, in the first or second instance of employing it after the lancet has been used.

The action of digitalis on the system appears to me to be twofold: it restrains the action of the heart after vascular depletion has been employed, the intermittent pulse which it produces being an index of this mode of operation; and it diminishes, or entirely extinguishes, morbidly increased action in the extreme vessels of the part diseased, especially of the pulmonic system of vessels, thereby cutting off the chief source and cause of diseased secretion, which being effected, the local disease ceases to exist.*

It will be recollected that I am speaking chiefly with reference to the species of pneumonia, and to incipient phthisis arising either as a consequence of pneumonia, or of bronchial inflammation. It may be proper to observe that I have not drawn the inferences here laid down from isolated cases; I have selected the most interesting and conclusive for the present paper; the whole details would far exceed the limits of a journal.

The case of Miss Moat (*case 1st*) elucidates the action of digitalis on phthisis in the incipient stage, supervening to hæmoptoë, and accompanied with slight inflammatory action.

* As respects the doses of the tincture of digitalis which I am usually in the habit of adopting, and which were always resorted to in the following cases, unless otherwise specified, it may be proper to keep in recollection, that I give ten drops the first dose, twenty the second, thirty the third, and so on, increasing ten drops every dose until I arrive at the quantity which produces either the intermittent pulse, vertigo, or nausea; then, in either case, I return to the dose with which I commenced, or to half the quantity of the last dose, according as I suppose that the sanguiferous system may be reduced still farther without disordering the stomach.

The disease was subdued by the bleeding. The progress of the strative of the influence of the The delicate structure of this pa my expectations during the hæmop toration, by means of the treatment perfect recovery, when exposure mony, which the powers of the were unable to withstand. This of the last stage of consumption was entered on. Her subsequent

Mrs. H.'s case (2d) bears a close symptoms of that of Miss Moat. was decisive, and, had not very existed in the liver, I have no would have been favourable.

The case of Master Morecoc influence of digitalis on the arteri was unfortunate, but the symptom and extent of mischief proceedin lungs, and I was not permitted t time in the last attack.

Mrs. C. (case 4th) evidently ow digitalis in checking the progress after the bleeding, until the p rallied. Had she not taken the f repeated bleedings would have be inflammation, and her delicate fr sunk under the rigorous disciplin case demanded.

The case of Miss Clarke (cas efficacy of digitalis where suppura neglect of depletion, during the In this case the digitalis acted co an intermittent pulse. I have no the violence of the symptoms) th the foxglove in this case, the n bleedings must have been incre patient, either by-failing to subdu or, had I succeeded in so doing, l patient has recovered the perfect lungs, and exhibits not a vestige o

In the case of Master Alfred digitalis was equally conspicuous place. The intermittent pulse w

and the child recovered from that moment, although incipient hydrocephalus existed at the same time. In Mason's case,* the medicine was beneficial after copious suppuration had supervened. In the case of Mr. Barker† the digitalis had no effect, although given to the extent of 300 drops in a dose. That gentleman was in the last stage of phthisis. He died in ten days after my first visit. There the foxglove failed, from the great extent of organic lesion; yet I was willing to witness whether any effect would be produced by it in so advanced a stage of the disease.

The case of Mr. E. Colman (*case 7th*) shows the influence of the remedy in arresting and keeping down the morbid excitement. In this case the digitalis reduced the pulse decidedly, and I was thereby enabled, by gaining time, to combat the symptoms more effectually.

Master Morice's case (*5th*) portrays the efficacy of the digitalis in a very striking manner: as soon as the intermittent pulse was levelled, the effect was decisive, as from that time the patient recovered.

CASE I.

Miss Moat, aged twenty-one, of tall slight figure and delicate habit, was attacked with pertussis, whilst a resident in England, at the age of sixteen; a chronic cough succeeded, and continued for two years. Her parents, in the hope that a residence at Madeira would re-establish her health, sent her to that island, where she experienced an attack of hæmoptysis; inflammation supervened, which speedily terminated in suppuration; and the quantity of expectorated matter soon became so abundant, that, after a three months' stay, it became necessary that she should return to England.

I was requested by her parents to see her, at Richmond, about a fortnight after her return. Miss M. was at this time expectorating nearly sixteen ounces in the twenty-four hours. She had been six weeks on the passage from Madeira; and it was a period of five months from the original hæmorrhage. She was removed from Richmond to Fulham in a close carriage, at a walking pace, in order that she might be under my more immediate observation. Notwithstanding the gentle conveyance that was observed, it was as much as her debilitated frame could support.

On the following day, June 1st, the symptoms were as follow:—Pulse 100, hard and small; tongue moist and nearly natural; bowels regular; cough frequent, occurring about every half hour or twenty minutes; slight headach; expectoration nearly sixteen ounces (purulent matter, with mucus) in twenty-four hours; countenance pale; cheeks slightly flushed; eyes clear; skin dry, but not hot. The catamenia had been suspended six months. At twelve

* REPOSITORY, Vol. XVI. p. 20.

† Ibid. Vol. XVI. p. 24.

one, A. M. June 5th, when sickness and retching which she expectorated about four ounces, with al-
lent matter. She has now taken two hundred a
the tincture in eighteen hours: the last dose, at e-
day evening, was sixty-five drops. After the vo-
menced, at two, P. M. with forty drops, 6tis horis.
been acted on five times. She vomited again at h

At six o'clock this evening, June 5th, I find her
Nine o'clock, pulse the same; nausea increased.

6th, noon. — Has not expectorated during
sick; vomited a little matter this morning; p
Two o'clock, nausea, headach, and pain in the be
took senna and salts this morning, which have oper-
gripping and vomiting. — Eight o'clock, considera-
totally ceased; pulse 96; skin moist. The purg
twice. There having been no expectoration durin
and a gradual decrease during the day, I suspe
which had been continued up to this period, maki
hundred drops in twenty-six hours. The appea
shape of the expectorations led me to infer that the
but from one vomica, or ulcerating cavity. Unde
persevered in my mode of treatment, in the hop
healthy action of that part of the substance of the
of the system generally.

7th. — She continues better; pulse 88. — Twelve
3vij. inf. gent. co. — Eight o'clock, pulse 96.
g^a. xx. The pulse fell to 88 in a few minutes
draught.

8th. — Pulse 86. Tinct. digital, g^a. x. sextis ho-

9th. — The pulse is 92, full and soft; expecto-

contained fifteen drops. The stomach now retains this dose without inconvenience. She appears comparatively well.

14th, eleven o'clock. — She complains of headach, pain at the chest, and slight difficulty in breathing. She stood, last night, in a cold room for some time, and afterwards felt much chilled, and passed a restless night. Pulse 96, sharp, and vibratory. V. S. 3iv. She was much relieved after the bleeding. Sulph. magnes, ʒiij. in inf. rosæ, 3x.; also tinct. digitalis, g^{ss}. x. 6tis horis.

15th. — She is much better: the symptoms are nearly all removed; pulse 86, soft; blood slightly buffed.

17th. — She continues better to-day. The catamenia have appeared. — Cont. digitalis.

18th, 19th, and 20th. — Still better; pulse 82, soft and regular. She walked a mile on the 20th, without fatigue. Her spirits are excellent. The digitalis had been omitted these last three days. It was again resumed, and sixty drops were taken on the 22d, and the same quantity on the 23d. Ten drops were given on the morning of the 24th. Slight nausea had supervened the preceding evening. The pulse remaining at 82, I discontinued the digitalis on the 24th, and continued the infus. rosar. until June 30th, when she left Fulham and returned to Richmond, so far recovered that she walked up the hill without difficulty. Her appetite was good, and the expectoration reduced to a mere trifle, from which she felt no annoyance.

In this state I left her at Richmond; but, unluckily, in the confidence of strength, she imprudently resisted the earnest representations of her parents, and sat near a window six hours, pursuing her favourite amusement, drawing, exposed to a current of damp air from the North. The consequence was, that I was summoned to her the next day, when, to my disappointment, I found her in a state of considerable distress, with great difficulty of breathing, a pulse of 120, thirst, fever, and, in short, all the signs of most active inflammation in the chest. I succeeded in reducing the urgent symptoms by bleeding, and the tinct. digitalis, g^{ss}. xx. thrice daily; but, at the end of a week, an abundant expectoration of pus supervened, her strength sunk rapidly, and, about two months from this attack, she expired.

I have no doubt, could Miss M. have remained longer at Fulham, that she would have completely and permanently recovered; but the air of Richmond was too bleak for the delicate state of her lungs, and being left there too much to her own guidance, she exerted herself beyond her strength, and, by her imprudence, paved the way for her premature dissolution. I could not examine the body.

CASE II.

Mr. D. H. short and stout, short neck, full habit, and highly plethoric, was attended by me, seven years ago, in a severe attack of acute hepatitis, which terminated in the chronic stage. The violence of the attack, and the rigorous depletions he underwent, but just saved his life, and he did not regain his health for six months. Three months after the commencement of my attendance, he complained of

a fixed, deep-seated, pain, exactly in that part of the liver immediately under the scrobiculus cordis. Suspecting the existence of incipient tubercles, I employed counter-irritation by blisters and tartar emetic ointment successively, and he took five grains of blue pill on alternate nights, for two months, when, finding himself considerably better, he discontinued all medicine and resumed his avocations, occasionally complaining of pain in the liver. Having been a sailor in his youth, he was very fond of "grog." In this favourite beverage he indulged most freely, and I was frequently called upon to remove the effects of this "powerful stimulus." The powers of the stomach were totally destroyed, he lost all disposition for food of every description, and, from the debilitated state to which he had reduced this organ, an attack of retching assailed him every morning, and to remove it he had always recourse to the brandy bottle. In this course he continued, drinking indiscriminately gin, brandy, porter, wine, and cordials. He could not bear pressure on the region of the liver, where he said the "old pain" remained. During this state of system he caught cold; inflammation succeeded, which he nursed with his favourite recipe, until his respiration became much oppressed, and a violent cough supervened.

In the month of March last he suffered an attack of hæmoptoe, which was induced by a paroxysm of coughing. The hæmorrhage at the time was profuse; he, however, withstood it, and went on for a fortnight after spitting mouthfuls of blood, still continuing his spirituous potations, till the 14th April, when, alarmed at the continuance of the hæmoptoe, he yielded to the entreaty of his wife and friends, and submitted to have advice.

On the evening of the 14th April I found him with a pulse at 120, full and bounding; tongue furred; eyes languid; countenance distressed; respiration exceedingly oppressed. He had taken no nourishment for some days, but he had not refrained from spirits. I took sixteen ounces of blood in a full stream from a large orifice, and ordered a brisk purgative. He fainted after the bleeding, and the pulse was reduced in calibre, but not in quickness.

15th, ten, A. M. — Has passed a quiet night, but has not slept; pulse 100, full and bounding as yesterday. Considering this a good opportunity to give the digitalis a fair trial, I ordered the dose to be increased ten drops every six hours. I had strictly urged the necessity of absolute quietude and rest, but he would get up, dress himself, and, in his boots, come down stairs. This exertion increased the hæmorrhage, and, at six o'clock in the evening, the symptoms being nearly as urgent as on the preceding day, I determined on repeating the bleeding to the same extent as before; and as syncope did not supervene, I took twenty-four ounces, which he bore very well. Immediately after my departure, I was summoned to him in great haste. In a violent paroxysm of coughing, the hæmorrhage from the lungs had returned, and, on my arrival, he was bleeding profusely. The pulse was lowered considerably in volume, but retained its velocity. I directed one grain ceruss. acet. and twenty drops of laudanum to be given, with thirty drops of digitalis, every four hours.

16th. — Hæmorrhage decreased; pulse 100, fuller; respiration freer; the bowels have been opened three times; cough urgent. He complains of a fixed irritation in the trachea; thirst excessive; skin hot and dry; tongue furred. — Tinct. digitalis, g^{ss}. xxx. 6tis horis; cum liq. amm. acet. 3ss.; syr. tolut. 3j.; et aq. puræ, 3ss. A blister to the chest.

17th. — Symptoms abated; less fever; pulse 90, soft, but full; no sleep. — Extr. papav. alb. gr. x. h. s. sum.

18th. — I found him down stairs and dressed, though with much difficulty, and obliged to be assisted! I remonstrated with him upon thus rushing into destruction; but he expressed his determination that "he would never say die whilst there was a shot in the locker!" In this unfortunate dilemma, struggling against wind and tide, I resisted the progress of the hæmorrhage by a regular exhibition of the digitalis until the 12th of May, having discontinued the acet. plumbi after the first dose, when an accession of inflammatory symptoms compelled me to have recourse again to the lancet, to which, with difficulty, I gained his consent. For some days previously to this bleeding I frequently observed an increase of pulse, for which I could account on no other principle than that he had taken his favourite remedy. I ascertained this actually to be the fact: his wife confessed that she could not keep him from it. After having bled him to the amount of sixteen ounces, the pulse sunk to 96, and I continued twenty drops of the digitalis every six hours.

On the 19th, he was considerably better, and, in the grateful impulse of the moment, I obtained a promise from him to abstain from brandy, provided that I allowed him a little wine and water; but the mischief was done. The dormant disease of the liver now began to develope itself. He could scarcely bear the pressure of the bedclothes on the præcordia. The cough had now decreased, and I observed pus mixed with the bloody sputum. I applied a blister to the region of the liver, which relieved him very much, and persevered with the digitalis regularly. The hæmorrhage gradually subsided, and, on the 20th of May, pus appeared in the expectoration.

21st. — In the course of the twenty-four hours he has expectorated about four or five ounces of purulent mucus, without the appearance of blood; pulse 86, somewhat hard. Suppuration having now commenced in the diseased part of the lungs, I continued the fox-glove, and increased the dose ten drops every six hours.

22d. — He has taken one hundred and twenty drops of the tincture since last visit. Pulse 46, intermittent, for the first time, full, and soft. The expectoration is diminished one-third. He is considerably easier, and the pulmonary symptoms are subsiding; but the hepatic derangement is increasing, and the enlargement of the liver begins to impede the action of the diaphragm. He has had tolerably good nights lately, his appetite has improved, and he has overcome his propensity for spirituous liquors for the last week. — Contin. g^{ss}. xv. digitalis, 6tis horis.

23d. — Expectoration decreased to less than one-third; no inconvenience now but debility and the uneasiness at the præcordia,

going on as it, probably in the act of the former was applied to the epigastric region, and, after the the unguent. antimon. tartarizat. was employed; almost confluent crop of pustules followed the use of produced on the state of the diseased viscus.

In this state things continued till the 30th of June change appeared. The patient described a sensation in the part affected, as "if something had given way twenty hours a conspicuous alteration appeared; July I found him very low and weak; pulse small. On the 3d he became delirious; the pulse rose, irregular action; the countenance became pallid; so the lips and teeth. I had ordered port wine and previous day; of the former he took nearly a pint, two tablepoonsful; I also prescribed decoct. cinch any expectation that he could be benefitted by meo symptoms increased, and he continued in a state delirium, which frequently assumed the appearance tremens, until the 26th, when he expired. The body in a few hours, and, being not in the best health at unable to perform the dissection.

In this case there was neither nausea, vertigo, produced by the digitalis. The intervention succeeded the employment of the medicine little doubt of the patient's recovery from the affection, had there not existed extensive hepatic might almost say he drank himself to death.

CASE III.

Miss Clarke, aged nine, delicate from her birth,

efforts in coughing; and headach. The expectorated matter was about four ounces in the twenty-four hours. The expectoration commenced about a fortnight ago, and has gradually increased to the present quantity. V. S. ad 3vj. et haust. purgans instanter. Syncope followed the bleeding, and the pulse sunk to 90. In the evening the pulse rose again, the bowels having been well acted on by the aperient. The blood was buffed and cupped. — R Inf. digitalis, ʒss.; mist. amygd.; liq. amm. acct. āā ʒij. M. Fiat haustus 6tis horis sumendus.

23d, eleven, A. M. — She has vomited and expectorated to the extent of four ounces during the night. The pulse is sunk to 80; respiration much freer. To have barley-water only. — Cont. haust. cum inf. digit. ʒijj. 6tis horis.

24th. — Bowels have not acted since yesterday morning. Enema purgans. — Nine o'clock, P. M. The enema has produced two evacuations, but without fætor, and coloured green by the infusion. The pulse has risen to 120, and is full and hard. — V. S. ad 3vij. in three vessels. Cont. inf. digitalis, 3vj. 6tis horis.

25th. — Pulse 86 and softer; expectoration lessened; the blood is highly buffed, and cupped in the two first vessels, but less in the third. — Pergat.

26th. — Symptoms abated; expectorates more freely; pain continues in the chest.

27th. — The pulse has risen beyond its former standard, being 120. The pain in the chest is increased, and attended with dyspnoea. — V. S. 3vij. Emp. lyttæ sterno. Haust. salinus cum tinct. digitalis, gr. xx. xxx. et xl. 4tis horis.

28th. — Has passed a much better night; the pulse is sunk to 50; and is intermittent and soft; has taken ninety drops of tinct. digitalis. The skin is covered with profuse perspiration. The expectoration is much decreased since last night; slight nausea; vertigo. Upon strict inquiry, I learn from the mother that she has by no means attended to the rules for regimen and diet which I laid down to her. This accounts for the return of the inflammatory symptoms. The blood drawn last evening is again buffed and cupped. I was strongly disposed to bleed again, but my faith in the foxglove prevailed, and I resolved to continue it. The grand criterion of its influence on the sanguiferous system being conspicuous in the intermittent pulse, I therefore continued the tincture, in doses of twenty drops every six hours, in infus. rosæ. — Nine o'clock, P. M. Pulse full, soft, and regular, at 60. The expectoration has decreased to less than one-half. Every symptom is favourable.

29th. — Continues to improve: allowed chicken-tea.

30th, May 1st and 2d. — During these days the recovery has been astonishingly rapid. The expectoration has decreased daily, and the pulse continued regular at 60, soft, and yielding to the pressure of the finger. The tinct. digitalis has been continued every six hours, in doses of twenty drops. Neither nausea, vertigo, or headach; occurred after the exhibition of the first ninety drops, which produced the intermittent pulse. I left her going on extremely well this

morning (the 2d May). I had desired other kind of food, save the chicken-broth. I found the child considerably worse morning: my visit was accidental, and doubting the mother's compliance was induced to watch the case more 96; dyspnœa returned; cough and digitalis has evidently failed. Convinced had been applied, I questioned the case unless informed of the true cause that, finding the child so much better, dressed, she complied with her wish herself to the damp and cold air; crammed her with stimulating articles the child could not recover this th decided. I took twelve ounces of t aperient, and sixty drops of tinct. di the night.

On the following morning, I was the little sufferer better. The blood d cupped in all the three vessels. S vomited once during the night.

3d. — She has taken one hundred since my last visit; pulse 40, full, diaphoresis. — Tinct. digitalis, xx. dr.

4th. — Better. 5th, 6th, and 7th, matory symptoms have completely sul at 65 since the 5th; expectoration raj

Not to tire the reader with the per suffice it to say, that my little patien and steady manner, continuing the i talis, gr. x. every six hours, from the off medicine.

The expectoration totally ceased on to take mutton broth, which gave plac the 10th June her mother took her int returned hale and hearty, the lungs pe the slightest difficulty.

The quantity of digitalis taken by to the 10th of May, is as follows: —

April 27th, 9 drops; 28th, 90; 29 3d, 120; 4th, 80; 5th, 80; 6th, 80 being altogether 900 drops in twelv infusion in the early part of her illness

Adverting to the increase of sy beg to observe, that observation t impropriety of permitting patients eat heartily of any favourite food, stimulating quality. Nothing is

determination to the head or lungs by sudden repletion after a copious loss of blood, whether from accidental hæmorrhage or by the frequent use of the lancet. In this opinion I perceive that I am borne out by Dr. Pring, in his *Principles of Pathology*. I cannot, therefore, too earnestly urge the strenuous prohibition, by the Practitioner, of any approach to a "full meal" in such cases.

CASE IV.

Mrs. C. a lady of delicate habit, who generally possessed good health, was attacked with symptoms of peripneumonia on the 3d of March in the present year. She refused to be bled or blistered; I could, therefore, only assuage the symptoms by purgatives, salines, expectorants, and the antiphlogistic regimen. In the course of six days expectoration commenced; and on the morning of the 9th of March I commenced the exhibition of the tincture of digitalis every six hours, beginning with five drops, and increasing five each dose.

10th. — Pulse 96, small and vibratory. Cough is increased. She expectorates about an ounce in the twenty-four hours, and complains of nausea. In the evening she vomited, and about the same time brought up from the chest about ʒiij. of mucus with pus. Pulse reduced to 75, full; skin covered with perspiration. She is obliged to go to bed, for the first time, having kept up against the disease since its commencement.

11th. — Has passed an unquiet night from the cough; has saturated two handkerchiefs during the night with the expectoration, consisting of viscid mucus with pus. Pulse 90, vibratory and small. I again urged the propriety of bleeding, which she decidedly refused. — *Coct. tinct. digitalis, gʷ. x. 6tis horis, in haustu salino.*

12th. — Much the same as yesterday.

13th, 14th, and 15th. — In the same state. The expectoration is rather on the decline, and the strength increased, although the pulse is at 90, and full.

16th. — Better. As the digitalis has not affected the stomach, it is to be continued at present, *i. e. gʷ. x. 6tis horis, in inf. rosar. ʒx.* The appetite is improved, and the patient sits up.

18th, 19th, 20th, and 22d. — During these days a gradual improvement has been perceptible. I allowed her to eat fish and light pudding, and ordered strict confinement within doors in a temperature at about 60, the respiration appearing freer in that medium. Expectoration to-day, 22d, about ʒj. in the twenty-four hours.

23d. — She caught cold yesterday by accidental exposure in a state of perspiration. The symptoms this morning are considerably aggravated: pulse 96, full and vibrating; skin hot; tongue furred; lancinating pain in the left hypochondrium; expectoration much increased since yesterday; has passed a sleepless night.

Through the persuasions of an eminent medical character, who was summoned on this emergency, the patient submitted to be bled. Ten ounces were abstracted, when the pulse sunk to 70; deliquium supervened when the arm was bandaged. On recovery the

pulse rose to 75, but it had lost its coadjutor, agreeing with me in my way of glove, permitted me to continue it in do

24th. — Pulse 60, soft and full; sleep at night from the cough; the expectoration continued last evening, although the medicine was applied. — Pergat.

31st. — During the last seven days a moderate expectoration gradually appeared: the expectoration amounted to one ounce in the twenty-four hours. I have been judging, in this case, of the size of the lung, by the form of the expectoration, which has diminished, as in the former cases, down to one-fourth its original size. The pulse is now full and soft. A gradual accession of strength now to leave her bed. I allowed her to get up and to drink soda water and milk.

April 6th. — The expectoration has diminished. Omittatur digitalis, et cont. inf. roseæ. Allowed to take a glass of claret.

13th. — Continued well all this week. I placed a flannel next the skin. The medicine was continued when a journey was proposed to Chelsea. There has perfectly re-established her health quite well.*

CASE V

On the 25th October, 1822, I was consulted by Morice, aged ten years. The symptoms were: chest; difficulty of breathing; cough; pulse 90, hard and vibratory; skin dry; unnatural fulness of the eye, and protrusion of the parietal bones, which indicated the existence of a chronic cerebral disease. The mother stated that in infancy there had been such a constitutional disease, that her medical attendant feared the influence of incipient disease. This was followed out of an attack of fever with cerebral symptoms, which child was, with difficulty, restored.† The primary object was to prevent the disease from participating in the present disease. Therefore, I detracted blood from the temple by the lancet; thus endeavouring to relieve the system generally. — Haust. ap

* The subject of this case continued to improve of this paper.

† It is very probable that aqueous humor in the ventricles during the advanced stage of the disease had remained unabsorbed, and given rise to the protrusion of the parietal bones by Mr. Wansbrough. — EDITORS.

October 26th. — The symptoms are unabated; the blood drawn from the arm is buffed and cupped. — Tinct. digitalis, g^{ss}. v. 4tis horis. Repetatur haust. aperiens.

27th. — Difficulty of breathing slightly relieved; pulse 86 and vibrating. — V. S. ad 3vj. Cont. tinct. digitalis, g^{ss}. x. 6tis horis. Emplast. lyttæ sterno admoveatur.

28th. — Better; cough increased; expectoration freer; pulse 80; has not lost the vibratory character; a little pain in the left side.

29th. — In the same state. — Emp. lyttæ lateri dolenti.

30th. — There has taken place an accession of symptoms during the night. This morning the pulse is 96, hard and tense; dyspnœa increased; pain, which is very circumscribed, is transferred to the left side, immediately under the fourth rib. The head aches this morning, and the eyes are glassy and suffused with tears. Blister has risen well. V. S. ad 3iij.

Evening. — The breathing is much relieved after the bleeding; pain in the side abated; headach gone; pulse reduced to 80, and softer, but still quick. — Tinct. digitalis, g^{ss}. xx. 6tis horis.

31st. — Symptoms but slightly abated; expectorated during the night about 3j. of mucus; pain in the side continues nearly the same; the skin moist; the bowels have been acted on twice during the night by an aperient taken last evening; the fæces were darker than before, and very offensive. The antiphlogistic regimen has been strictly enforced, yet the symptoms have resisted the treatment.

November 1st. — The pain in the side is increased with the cough; has expectorated during the night; as before, the difficulty of breathing increased by the pain attendant on inspiration; pulse 96, full, tense, and vibrating; bowels open; skin hot. V. S. ad 3vj. When the pain ceased, syncope supervened, and the patient became exhausted. The case thus going apparently from pleuritis to peripneumonia, I began to apprehend a termination in suppuration. Under these circumstances I became more anxious to give the digitalis a decisive trial, as in the former cases; accordingly, as the patient was taking twenty drops, 6tis horis, I ordered, in addition, progressive doses of five drops.

2d, nine, A. M. — My little patient is much relieved since yesterday; the pain in the side has nearly left him; the pulse is at 70, regular and steady; but there still exists the inflammatory vibration, though not sufficient to warrant venæsection. I suspended the lancet this morning, in the hope that the progress of the mischief is arrested. The last dose of digitalis was forty drops. — Pergat.

3d. — I am much disappointed this morning to find my patient worse than when I left him last evening. The pain in the side is increased, and with it the dyspnœa; the pulse has risen to 80; and the system is distressed. Nothing appears now likely to arrest a termination by suppuration, and I accused myself of suspending the use of the lancet yesterday; nevertheless it is clearly indicated this morning. I therefore took from the arm six ounces, which reduced the pulse immediately to 65; and my patient experienced an almost total remission of symptoms: the pain, however, returned in half an

hour after, but considerably abated. the digitalis; and as it had not as continued the doses of the tincture as b

4th. — The pain in the side continue I applied a large blister to the chest, ex sternum. The pulse continues steadily softer; the vibratory tense feel still ren that the acute symptoms have not yet give the foxglove in the form of tinctur have ordered twenty drops to be taken infusion of the recent leaves gathered expect, will operate as an excellent a disposition to organic lesion in the l sanguiferous system by the foxglove.

Vespere. — On entering the room I just eleven hours after my last visit, I quiet. His eyes were half closed; his spiration; the respiration was regular, a difficulty than I had previously noticed the pulse much less, from the quantity two doses since it was prescribed in I of the tincture, and 3j. of the infusion, a on the preceding days, I was but little tions of the heart reduced to forty in I such irregular periods that a second between the beats. The blister has inflamed. I now felt so confident in that I hesitated not to give a decide termination, which the following morni omitted this night.

5th, *Manc.* — My patient appears c entirely removed. The cough scarcely 50, regular, soft, and yielding. I allow To avoid unnecessary detail, I will on now given in doses of five drops twice steadily at 50 for three weeks; at the was considered perfectly well.

There does not appear at the present attack) the slightest injury of the lung fellow has continued quite well ever sin

I cannot help thinking that I ow instance of the exhibition of the d tincture, it being made two years much inclined to doubt its effects i by the infusion. This latter I woul the inflammatory action does not r

In the first cases of pulmonar

tincture alone sufficient to affect the pulse ; the preparation was then about a month old.

It is proper to observe here, that the case terminated without any expectoration of pus whatever. — [N. B. The appearance of cerebral affection, noticed in the commencement of this relation, has not been observable since his recovery.]

CASE VI.

On the 14th May, 1820, I was requested to see Master Morecock, aged twelve years. He had taken cold, and was labouring under difficult respiration and slight cough, with pain referred to the left side. From the youth's general appearance, I had not any reason to apprehend any thing like a phthisical predisposition, being in pretty good general health, save the pulmonary affection for which he was to be treated. I took from the arm $\frac{3}{4}$ x. of blood in a full stream, opened the bowels by an aperient draught, and prescribed antimonials and salines for ten days, the symptoms yielding daily ; but on the eleventh day cerebral congestion and headach rendered cupping necessary. The operation was efficacious, and all the previous symptoms yielded to the removal of the secondary disorder. I could only trace, in this attack, inflammation of the pleura costalis and pulmonalis.

The depletory treatment, with abstinence, was found sufficient to the restoration of the patient, and therefore digitalis was not used. The lrd was removed to Highgate, where he was placed at school during the succeeding spring and summer, and returned to this place apparently well in the autumn. He continued in good health until the following summer, when, on the 8th of June, 1822, he was attacked with decided symptoms of peripneumonia. The pain, which was deep-seated, was now referred to the chest ; pulse 100 and sharp ; respiration checked ere the lungs were inflated to half their area. I bled him in the arm, and ordered twenty drops of tinctura digitalis 6tis horis. The bowels were acted on at the same time by a brisk cathartic.

9th. — Breathing freer ; pain less ; blood highly buffed and cupped ; has had six motions ; pulse 90, regular and softer ; slight headach. — Pergat in usu digitalis, gr. xv. 6tis horis.

10th. — No headach ; pain nearly gone ; breathing freer.

11th and 12th. — Better ; no pain ; pulse 70, soft ; bowels regular ; breathing free.

13th. — Convalescent. Medicine was left off, and light diet ordered.

On the 4th of November I saw him again, after he had come home, in consequence of a return of his former complaints. His pulse was 120, quick and vibrating. The difficulty of breathing was greater than ever, and the pain of the left side more violent than before. Bleeding was proposed, but rejected ; and, in the hope of reducing the action of the heart, I gave him the tincture of digitalis in doses of fifteen drops, 6tis horis, for nine days, occasionally evacuating the bowels, and enforcing the antiphlogistic regimen

during that period. The symptoms, however, gained ground on the 9th November, he consented to be bled. I took from twelve ounces in a full stream. He was sensibly relieved by the operation, and I followed up the exhibition of the foxglove with the in the dose of \mathfrak{zss} . with fifteen drops of the tincture, every six hours.

10th. — The symptoms are much abated; slight cough expectorated a little mucus. The pain in the left side now extends to the sternum. — *Emp. lyttæ sterno applicetur.* *Cont. dig. haustu salino, 6tis horis.* The pulse to-day is 100. The skin which has been covered with a white fur, is now becoming red at the point and edges.

11th. — The blister has risen well; the pain in the side is much abated, but still remains in the side; pulse 90, still vibrating. I wished to bleed again, as it is evident the inflammatory action is beyond the reach of the digitalis, having now taken two hundred and forty drops of digitalis, and \mathfrak{zvj} . of the infusion. My proposal was rejected, and I declared that phthisis would inevitably supervene.

12th, 13th, and 14th. — The difficulty of breathing and cough increased with the pain in the chest these three last days. The patient is evidently much distressed. The pulse is now 90, tense, and vibrating. I requested that the opinion of some respectable Physician should be taken relative to the propriety of bleeding, but this is so much objected to.

On the 15th he showed no symptom of amendment. A bloodletting was taken, during this attack, with scarcely any effect, save as a temporary relief. I then gave four hundred and eighty drops of the tincture of digitalis, and continued the infusion. In the full conviction that the efficacy of the remedy was suspended by the inflammatory action going on in the lungs, I again urged the necessity of a second bloodletting. He was taken to London without my knowledge; and, thus untreated, I saw no more of him until early in the month of May, when I was again requested to attend him. I found him much distressed, pulse at 130, small and vibrating, with great oppression, *præcordia*, cough, attended with difficult expectoration of viscid mucus and some pus. I suggested bleeding again, but he was in a forlorn hope, which was again resisted, but was allowed to continue the foxglove. Willing to ascertain how much the stomach would bear, I commenced with twenty drops, and increased five every six hours. In the course of forty-eight hours he had taken three hundred and fifty drops, the last dose being eighty. Slight nausea and vomiting were produced, but the pulse continued nearly the same, with the exception of being a little fuller.

Once more, and for the last time, I wished to bleed him, but this was finally prevented; and the next day the patient was taken to London, where a Practitioner in London, who pronounced his lungs sound, declared the case to be mesenteric glandular disease; of course prohibiting bleeding. This was on the 18th May. Here again the treatment failed. This Practitioner recommended Margate for change of air, whence he was soon compelled to return, owing to an attack of diarrhœa. A neighbouring Apothecary was now called in; and

case becoming hopeless, opiates were given to relieve pain and procure rest. I saw him during the last fortnight of his life. His extremities were then oedematous, and the air passages were obstructed with mucus. He died on the 13th of September.

Dissection. — I examined the body with the gentleman who attended him during the latter part of his illness. The colon exhibited the appearances of recent inflammation to the extent of twelve inches of its ascending and transverse arch: about the same extent of the ilcum presented a similar appearance. The mesenteric glands were enlarged, particularly the clustre in the centre of the mesentery, and near the vertebræ. The substance of these glands was of a steatomatous character, in an incipient state. There was not any appearance of inflammation either within or external to them. The liver was particularly healthy. The perfect state of this viscus warranted the conclusion that the enlargement of the mesenteric glands was not of long continuance. The left pleuræ costalis and pulmonalis adhered so closely, that it was impossible to separate them without the use of the knife, which accidentally wounded the lung, when there issued a stream of matter, which flowed into the cavity of the chest. On examining the substance of the lung, a large cavity was laid open to view, whence the matter had flowed. We could not discover any communication with the bronchiæ, the abscess being walled in by the cellular substance of the lung in an indurated state, to the extent of a line in thickness. The contents of the abscess might have been, as near as we could form an idea, about four ounces. The right lung was perfectly sound.

I beg to be understood, in my explanation of the action of the foxglove in inflammation, that, beyond a certain inflammatory excitement of the sanguiferous system, it possesses no influence; but reduce the arterial action by blood-letting, and then exhibit the remedy, it will often arrest the further progress of inflammation and consequent suppuration. The dissection of this case shows how far I was right in urging, to my own injury, at the time, the treatment which I did.

CASE VII.

Mr. E. C. aged twenty-one, six feet high, of delicate frame and nervous temperament, was attacked with symptoms of decided peripneumonia. A slight cough, without expectoration, which had continued for nearly a fortnight, first alarmed him, and loss of strength and appetite followed. His pulse was full and bounding, at 100; the pain in the side, of which he had at first complained, now affected his respiration; and his rest was so much disturbed by the cough, as to keep him awake nearly the whole night. I bled him to the amount of twelve ounces, which produced syncope, ordered a brisk aperient, applied a blister to the chest, and consigned him to the effect of digitalis, forty drops 6tis horis. As his residence was at a distance, I did not see him until the third day, when all the symptoms were completely removed, and the pulse had become

steady at 80. His appetite and streng week, and he resumed his avocations. recovered, he unfortunately became (caution in guarding his delicate frame a recurrence of symptoms consequent me to his residence. The necessity for urgent, I bled him to the extent of faint, but remained sensible. As the with the mistura amygd. and forty dr (recent) every six hours. The followi the symptoms had abated, but the i pulse remained as on the previous day faint after my departure, and continu the morning. The blood drawn, in th the inflammatory coat. As the foxgl the circulation, I wished to bleed agai depletion, I therefore doubled the dose appearance of symptoms this morning tary predisposition to pulmonary disea to give but a very unsatisfactory pr succeeding day, however, I found my He had passed a better night, and had sleep. The pulse was now reduced to though the intermittent character was of urgent symptoms during the last with such sanguine hope, that I gav more favourable prognosis. ʒss. of s added to the mixture to keep the bow tincture was reduced to forty drops da to the chest as a counter-irritant, to mischief. Thus, on the third day, I my patient decidedly better from the e

On the fourth day Mr. C. had n pulse sunk to 50, and the powers of th the course of ten days, that is, a fort out in his carriage, clothed in flann worn. He is now perfectly well. I co on him upon the 27th September, the and my last visit was on the 2d of symptoms was so continuous, and th that I have avoided the form of dates, diurnal routine, which of itself is in th

I have published the above case in which I have employed the dig its efficacy and the causes of its others in which, from the symp from the cases themselves being of the remedy might have appea more equivocal than in these. It

■ cases which I have just related, I have exhibited the digitalis
 ■ in larger and more frequent doses than usual; but I have no
 ■ doubt that it may be given in pulmonary disease even to a
 ■ greater extent than I have yet ventured to prescribe it, pro-
 ■ vided the patient be closely watched.

■ I have called attention to this remedy not from any idea
 ■ of novelty being connected with its use in diseases of the
 ■ lungs. We all know the encomiums which it has received,
 ■ in such cases, from Dr. Ferriar, Dr. Fowler, Dr. Beddoes,
 ■ and from Dr. Drake. I, however, think, that since the
 ■ period at which the praises of those Physicians brought it
 ■ into repute, it has fallen into very general and very unmerited
 ■ neglect. My object in the present paper, as I have before
 ■ stated, is to direct a greater share of attention to it in
 ■ pulmonary diseases than it has for some time past received,
 ■ and to show that it may be advantageously carried to a
 ■ greater extent in those maladies than it has hitherto been;
 ■ and hence to infer that the chief reasons of the discredit
 ■ into which it has fallen in the present era of medical science
 ■ are, the inefficient doses in which former trials of it were
 ■ made, the inattentive manner in which its operation was
 ■ watched, and the neglect of depletion before its exhibition, as
 ■ well as a neglect of the repetition of depletion as indicated
 ■ by the effects of its exhibition.

Fulham, 30th September, 1823.

III.

Critical Remarks on the London Pharmacopæia of 1809, and the altered Edition of 1815; with Suggestions intended to obviate the Objections made against attending to the Directions contained in the "Pharmacopæia Collegii Regalis Medicorum Londinensis;" submitted to the consideration of that Learned Body, and the Medical Profession in general.
 By J. H. SPRAGUE, Esq. Member of the Royal College of Surgeons, London, and of the Medico-Anatomical Society of Bristol, &c.

(Concluded from page 417.)

PREPARATIONS OF LEAD.

Liquor Plumbi Subacetatis.—Mr. A. T. Thomson observes, "that the London and Dublin Colleges err in naming this preparation a subacetate, and that Berzilius is in the same manner mistaken." "The acetic acid which the distilled vinegar contains, in a highly diluted state, attracts a portion of the oxyd of lead, and forms an *acetate*, which

remains dissolved. Other chemist preparation as incorrectly named, as being a *subsalt*." Mr. Thomson proportion of litharge ordered in b a gallon of distilled vinegar, of t being capable of dissolving *ten ounce* Dublin College orders but one po of distilled vinegar, and it seems, fr that it should not exceed that quan

Medical uses. — The common u acetatis dilutus is too well known but I believe it is not so generally liquor plumbi acetatis is a remedy c cation to warts on the glans penis other anomalous excrescences. M time since a case in St. George's some excrescence on the nose wa the application of this remedy. I work on Diseases of the Eye, obs acetatis, in its *undiluted* state, is th recommend as the most efficacious ophthalmia." *

Liquor Plumbi Acetatis Dilutu
Dr. Paris remarks, in the fifth edit " that the quantity of spirit ordere small." I believe the annexed fo in every respect preferable : —

R Liquor Plumbi Acetatis, :
Acidi Acetici Diluti, ʒij.
Spirit Rectificati, ʒiss.
Aqua Distillata, ʒxiv.

N.B. — The addition of dilute ac completely in solution than it otherwis

PREPARATIONS

Zinci Sulphas. — The white v never to be employed in medicine without previous purification. Th in the next Pharmacopœia.

PREPARATIONS OF

Potassa Sulphuretum. — Mr. Th marked, that this sulphuret cann ordered by the College. " For complete, it is necessary to expose

* Vide Vetch on Diseases of the Ey 1820.

in a crucible to a red heat previously to its being rubbed with the sulphur: the water of the subcarbonate is thus dissipated, and at the same time a portion of the carbonic acid is expelled, both of which, when not driven off, alter the product. When the fusion is effected, the mixture is to be poured upon a marble slab, and, as soon as it concretes, the mass must be broken in pieces, and preserved in a closely-stopped bottle."

DISTILLED WATER.

It has been observed by Mr. Thomson, that many of the distilled waters, when long kept, undergo a species of decomposition, become sour, and a ropy viscid matter forms on them. In order to prevent this, he recommends their redistillation in preference to the addition of the spirit ordered by the College. In this recommendation I entirely concur, because, in this way, the waters are obtained impregnated chiefly with the essential oil of the plants, and with their aromatic properties, without any of the feculent or saccharine constituents, to which the decomposition in question is, in my opinion, chiefly owing.

INFUSIONS. — (*Formula Extempor.*)

Infusus Quassia. — Dr. Paris remarks, "that the proportion of quassia directed for half a pint of water by the London College is much too small; for in order to obtain a saturated infusion two drams are required for that quantity of water."*

Infusus Rhei. — The above observations on the infusion of quassia will equally apply to this infusion. There is too small a quantity of the substance for the vehicle in which it is infused; a formula similar to that of the Edinburgh College would be preferable, or the following neat and efficacious infusion, varied a little from the Geneva Pharmacopœia: —

R Rhei Radicis concisæ, ʒss.

Aquæ Ferventis, Oss.

Macera Radicem per horas duas in vase levitèr clauso, et cola;
dein adde,

Sacchari Albissimi, ʒij.

Olei Menthæ Viridis, gʒ. viij. solutas in

Spiritu Menthæ Piperis, ʒj. Tunc misceantur.

Infusus Rosæ. — As none of the infusions can be kept any length of time, without undergoing decomposition, the quantity of this infusion, ordered to be made at once by all the

* Vide Pharmacologia, Vol. II. p. 225.

British Colleges, is much too large. The following proportions would be more uniform and less wasteful : —

R Rosæ Gallicæ Petalorum exsiccatum, 3ij.
 Aquæ Ferventis, Oj.
 Acidi Sulphurici Diluti, 3ij.
 Sacchari Purificati, 3vj.

N. B. — Pour the water on the rose petals in a covered earthen glass vessel, stirring them well under : after infusing for ten minutes add the dilute sulphuric acid, then macerate again for twenty minutes longer. Finally, strain the liquor, and add the sugar to it. Acid be added to the petals at first, as ordered by the London College they will be constricted, and not yield that beautiful colour which this infusion is so much admired : this may be satisfactorily ascertained by experiment. As its virtues chiefly depend on acid, the proportion may be increased with much propriety.

Infusus Sennæ. — Dr. Paris justly observes, that “ the quantity of infusion directed to be made at one time is injudicious,” &c. * The subjoined is a very excellent agreeable formula : —

R Sennæ Foliorum, ʒss.
 Coriandri Seminum Contus. 3j.
 Extracti Glycyrrhizæ, 3ij.
 Aquæ Ferventis, Oss.

Macera per horam in vase levitèr clauso, et liquorem cola.

Dr. Cullen says, that coriander seeds infused with a more powerfully correct the odour and taste of the medicine than any other aromatic, and are equally successful in overcoming costiveness, which senna is very apt to induce. The correctness of this statement I have often proved in practice. I have, however, added the ginger with advantage, directed by the College (using also the coriander seeds), the above formula, in flatulent colic, in phlegmatic and hypochondriacal temperaments, and when no inflammatory action was going on.

MUCILAGES.

Mucilago Acaciæ. — The name of the species whence the gum is obtained ought to be added to the appellation, and specific directions given to strain the mucilage through linen, as this gum is often mixed with impurities.

DECOCTIONS.

Decoctum Cydoniæ requires the adjunct *seminum* to its appellation.

* Pharmacologia, Vol. II. pp. 257, 258.

Decoctum Lichenis. — The impropriety of using only the generic name of the plant is here very obvious; particularly as another species of this extensive family, the *lichen rocella*, is now introduced into the Dublin Pharmacopœia.

Decoctum Malvæ Compositum. — The best method of making this decoction is first to boil the dry mallows in the water for a quarter of an hour, and infuse the chamomile in it while hot; as by boiling the essential oil of the flowers is completely dissipated.

Decoctum Papaveris. — In preparing this decoction, the seeds should be bruised with the capsules and retained, as they yield a quantity of bland oil, which increases the emollient quality of the decoction. *

Decoctum Sarsaparillæ Compositum. — It should be particularly noticed (if the present method for preparing this decoction is retained by the College), that, by boiling the sassafras with the other ingredients, its essential oil, in which its virtues (if any) reside, is dissipated. A preferable method would be to infuse it in the boiling decoction (after taking it off the fire) until cold. Mr. Thomson judiciously observes, "As the whole of the active matter of the sarsaparilla root resides in the cortical part, and can be extracted from this by *infusion*, as well as by decoction, there is no necessity for the various macerations and boilings ordered by the Colleges, which, in fact, injure the remedy." This remark demands attentive consideration. The subjoined formulæ are pharmaceutically correct; they contain all the qualities that the sarsaparilla can impart to an aqueous menstruum, and are prescribed by Mr. Brodie in preference to the decoction.

R Sarsaparillæ Radicis concisæ et contusæ, ʒiss.

Glycyrrhizæ Radicis contusæ, ʒss.

Coriandri Seminum contusæ, ʒij.

Liquoris Potassæ, ʒj. (vel sine).

Aquæ Ferventis, Oj.

Macera per horas xxiv. in vase levitè clauso, et cola; liquoris colati sumat partem ʒtiam ter quotidie.

VEL

Infusus Sarsaparillæ Alkalinus.

R Sarsaparillæ Radicis concisæ et contusæ, ʒiv.

Glycyrrhizæ Radicis contusæ, ʒj.

Liquoris Calcis, Oiv.

Macera per horas xxiv. in vase levitè clauso, sæpe agitand. et cola.

The above-named eminent Surgeon orders a pint of this

* See Pharmacologia, Vol. II. p. 177.

been owing, no doubt, to the various quantities of the mode adopted for extracting its virtues ; and men are in theory divided as to what constitute it of this medicine, and the best methods of obtaining its efficacy be partial and unsatisfactory. A prevalent errors respecting sarsaparilla, and to the value of the different kinds, has induced me to attention to the subject. The sarsaparilla imported market is generally distinguished as Lisbon, H Cruz ; those being the ports from which it has us Within the last three or four years, sarsaparilla from Jamaica, and is generally supposed to be island. It differs much from the other kinds in a more in the extract it yields. It has a peculiar coat, is of somewhat close texture, and, when cut part next the outer coat (which we designate a kinds) is found, more or less, to be of a deep red some time since, strongly recommended to the Mr. Richard Battley, whose reputation as a pharmacist is well known, and who, by a number of very experiments, satisfactorily established its superiority obligingly favoured me with the results of his experiments for the most part, fully confirm my own observations on the growth of Jamaica, and has distinguished *rete mucosum sarsaparillæ*, on account of its deep particularly of the inner bark. From a careful examination of all the kinds of sarsaparilla, it is satisfied

“ That the whole medical efficacy of the plant and consists of pure extractive matter, of which the yields the largest quantity.

“ That the root, deprived of its cortical part,

an elegant soluble extract may be obtained, containing all the virtues of the plant, not liable to decomposition, and applicable to the various purposes of extemporaneous prescription.

"From what has been thus briefly stated, it is evident that by the usual mode of treating sarsaparilla, is chiefly obtained a large proportion of *insoluble, inefficacious* matter; that the kinds of root usually selected contain only a small proportion of the active properties of the plant, compared with the *red*, lately brought from Jamaica, and which is decidedly the best we are at present acquainted with." If what has been said will not induce the London College to substitute the infusion of sarsaparilla for the present *injudicious* decoction, I know nothing that will.

Decoctum Senekæ. — The addition of half an ounce of liquorice root to this decoction covers the disagreeable pungency of the seneka, and renders it a more grateful medicine.

Decoctum Quercus. — There appears to be a complete oversight by the London College in regard to this decoction. The oak-bark should have been ordered to be bruised, as, without this is attended to, the water cannot sufficiently penetrate the bark, so as fully to extract its qualities.

EXTRACTS.

From what Dr. Paris has said, the extracts, as made by Mr. Barry, by *evaporating in vacuo*, deserve the attention of the London College, as he remarks, "the principle is, without doubt, calculated to secure the active qualities of the plant from those changes to which it is constantly liable during the ordinary operation of inspissation. The extracts thus prepared are certainly more powerful in their effects, and some few of them appear also to possess properties which are not to be distinguished in the extracts of commerce." Surely, after saying so much in favour of extracts so prepared, the London College will give directions for conducting a process similar to Mr. Barry's. For additional information, see *Pharmacologia*, Vol. II. p. 192.

Extractum Cinchonæ. — The judicious observations of Dr. Paris respecting this preparation will, it is to be hoped, be attended to in the next edition of the *Pharmacopœia*.

Extractum Colocynthis Compositum. — For the sake of brevity, I beg leave to refer the reader to the remarks of Dr. Paris, on this extract, in the *Pharmacologia*, Vol. I. pp. 100, 101. He will there find sufficient reasons to induce the College to restore the soap as in the preparation of a former *Pharmacopœia*. If this extract is still to be retained, a process similar to that of the Dublin College is one of the most unexceptionable. However, I am of opinion that a preparation containing all the qualities of this extract in

greater perfection, without being deteriorated by the complicated processes of the Colleges, is contained in following pill mass, and it has the additional recommendation of being made with much less trouble and expense, and sure no person can presume to say that it does not contain all the active qualities of the former.

Massa Pilule Colocynthis Composita.

R Colocynthis Pulpæ, ʒss.

Aloes Spicatæ extracti veri.

Scammoniæ Gummi-resinæ, āā ʒj.

Saponis Duri, ʒij.

Olei Caryophilli, ʒj.

Aloe, scammonia, et colocynthis, pulpa in pulverem rediguntur cum sapone atque oleo conterantur; denique cum lagine acaciæ subigantur in massam.

Extractum Conii.—Dr. Paris speaks in the most favourable terms of this extract as prepared by Mr. Barry; and Maton has found that the virtues of it are much increased including the seeds in its preparation.

Extractum Elaterii.—The improved process recommended by Dr. Clutterbuck for producing the extract of elaterium as prepared by Messrs. Allen & Co. Plough Court, Lomb Street, is deserving the adoption of the College.*

Extractum Humuli.—It has been remarked that, during the evaporation of the decoction of the hops, the essential oil is entirely dissipated, and the extract thereby deprived of the most active property of the drug. As the virtue of the extract is very doubtful, perhaps the London College think proper to reject it from the Pharmacopœia, or order a process that will secure, with more certainty, the essential qualities of the hop.

Extractum Opii.—By the College process, the most active property of the opium is so much diminished, that two grains of the extract are only equal to one of the unpurified opium. Being a superfluous preparation, it ought to be expunged from the Pharmacopœia. Genuine powder of crude opium should always be kept in the shop; and if extemporaneously formed into pills, with conserve of hips, is more to be depended on than such an uncertain preparation as the extract.

* See "Observations on the Nature and Preparation of Elaterium," published in the REPOSITORY, Vol. XII. No. 67; for further particulars concerning this substance, consult the Pharmacologia, Vol. II. pp. 201—208.

MIXTURES. — (*Formula Extempor.*)

Mistura Camphoræ. — This mixture, as at present prepared, must be considered as water merely impregnated with the taste and smell of the camphor; but the substance is not sufficiently diffused through this menstruum to impart to it any of its medical qualities. I would beg leave to suggest the following method of preparing it: —

R Camphoræ, 3j.
 Spirit. Rectificati, ℥xx.
 Magnesiæ Subcarbonatis, ʒij.
 Sacchari Purificati, 3ij.
 Aquæ Distillatæ Ferventis, Oj. M. ft. mistura.

The camphor is to be rubbed into a fine powder by means of the spirit, then with the purified sugar and subcarbonate of magnesia, and afterwards the boiling water is to be added very gradually. The mixture should be poured into a vessel, kept closely covered for two hours, and strained *several* times through a piece of fine lint, placed in a funnel.

Remark. — By the subcarbonate of magnesia, the camphor is rendered more divisible, and I think the water holds a greater quantity of it in solution than by any other process. At all events, the College formula is very objectionable, if we expect to derive from it any of the medicinal effects of the camphor; and if not, wherefore is it ordered?

Mistura Cretæ. — A much more convenient and expeditious method of preparing this mixture would be by the College ordering a powder to be kept in the shops for that purpose, named *pulvis cretaceus*, which will be placed among the additional powders. The mixture is to be made as follows: —

Mistura Cretæ.

R Pulveris Cretacei, 3xj.
 Aquæ Distillatæ,
 — Cinnamomi, āā Oss. Misce.

Ft. mistura cretæ, cujus dentur fluidunc. ij. post singulas sedes liquidas: urgentibus alvi dejectionibus sit pro potu communi.

The cinnamon water renders the mixture more grateful, and takes off the disagreeable earthy taste of the chalk.

Mistura Guaiaci. — A general objection to a mixture of guaiacum gum by patients is, that it produces a very unpleasant burning sensation on the palate and in the œsophagus. Why then order cinnamon water, which increases this effect, without in any respect promoting the efficacy of the medicine? The subjoined is an agreeable and efficacious formula.

Mistura Guaiaci Ammoniata.

R Guaiaci Gummi resinæ,
 Pulveris Acaciæ, aa ʒij.
 Decocti Glycyrrhiæ, Oss.
 Liquoris Ammonię Subcarbonatis, ʒijss.
 Tere Guaiacum et Pulv. Acaciæ cum Liquore Ammoni
 gradatim adde Decoctum.

SPIRITS.

Alcohol.—I agree with Mr. A. T. Thomson, who observes that the process of the Dublin College for obtaining alcohol is to be preferred. For some valuable observations on this subject, the reader is referred to the London Dispensary third edition, p. 778.

TINCTURES.

Tinctura Aloës Composita.—The College having decided that saffron possesses no medicinal virtues, and that it is employed for its colouring matter, why order so great a quantity of this *expensive article* in a tincture which does not require a colouring ingredient? By the addition of saffron, the expense of making a pint of this tincture increased from *four to ten shillings!*

Tinctura Camphoræ Composita.—A gentleman who, from much experience, is acquainted with the public dissatisfaction expressed by the alteration made in this tincture, observes, "The oil of anise-seed is said to have been omitted on account of its disagreeable flavour, but to most persons it is quite the reverse. There are Practitioners who believe that they have administered the oil of anise-seed in cases of asthma and chronic cough with advantage, and are inclined to attribute much of the benefit produced by the paregoric elixir of the former Pharmacopœia, in such affections, to it. By selling the compound tincture of camphor without the oil of anise-seed, many retail chemists have very undeservingly been censured for vending an inferior article; and they have been accused of not compounding old family recipes correctly in consequence of the medicine not having its usual flavour. As this tincture derives its virtues chiefly from the opium, is not the old name *tinctura opii camphoræ* more proper than *tinctura camphoræ composita*? The colour, taste, and smell, are quite sufficient to distinguish it from the tincture of opium, which is the reason assigned by the College for changing the name. The following pristine method of making the paregoric elixir renders it a very agreeable tincture, and I know it would be approved of in lieu of the present *tinctura camphoræ composita*."

Tinctura Opii Camphorata. — (*Sive Elixir Paregoricum Pharmacopœiæ Pristin.*)

R Camphoræ, ʒij.

Opii Crud. in Pulv., Acidi Benzoici, āā ʒj.

Olei Anisi, ʒss. Potass. Subcarbon. ʒj.

Omnia in mortario simul optimè terentur; paulatim affunde Spiritus Tenuioris, Oij.; stent in digestionem per dies septem, vas subinde agitans; tum adde Radix Glycyrrhizæ incisæ, ʒiv.; digere iterum per dies septem, et cola.

Tinctura Cinchonæ Ammoniata. — There is reason to believe that the cinchona is decomposed by the ammonia, which renders it an incompatible combination; * and if the ammonia is not incompatible, the tincture contains so small a portion of the cinchona in solution, that it would be more judicious to add an adequate dose of spirit. ammonia aromat. to a decoction of cinchona and its compound or simple tincture, in extemporaneous prescription. As a superfluous preparation, seldom prescribed, it may with propriety be expunged from the Pharmacopœia.

Tinctura Cinchonæ Composita. — Query. "If the only use of the saffron and cochineal is to heighten or give colour to medicinal preparations, why order such expensive articles in a tincture in which their colouring matter is nearly, if not entirely, lost?" Beside, it is of great importance to hospitals and other charitable institutions that the official formulæ of the College should be rendered as economical as possible.

Tinctura Humuli. — "The whole of the menstruum will be so completely absorbed by the dried hops, that it will require a strong press to obtain *two ounces* of the tincture. By employing the *seeds* of the hop, in the proportion of an ounce to a pint of proof spirit, a tincture may be obtained strongly impregnated with its medicinal virtues."

Tinctura Jalapæ. — "If the jalap be powdered as ordered in the present formula, the tincture will be so thick that one-half of the spirit will be lost by evaporation during the time it will require to filter. The spirit will not take up the active matter of the quantity of jalap ordered in this tincture; hence there is an unnecessary waste in the London process." The following is a preferable method of making it: —

Tinctura Jalapæ.

R Jalapæ Radices incisæ, ʒvj.

Spiritus Tenuioris, Oij.

Macera per dies quatuordecim leni calore, et per chart. cola.

N. B. — Particular attention should be observed in ordering the jalap root to be *thinly sliced, not powdered.*

* See Pharmacologia, Vol. II. p. 147.

WINES.

Vinum Aloes.—This preparation may be very superseded by the subjoined excellent combination should be named *vinum aloes alkalinum*. Mr. Thomson serves, "Aloes are advantageously combined with and in this state I have long been in the habit of eating a wine, containing aloes and myrrh, in dyspepsia acida, and also in that affection of the mesenteric of children which produces a tumid and tense abdomen. The following is the formula I employ, which was with some modification, from a very old Pharmacopoeia accidentally fell into my hands, but of the date of which I have unfortunately preserved no memorandum:—

R Sodæ Subcarbonatis, ʒij.
Ammonia Carbonatis, ʒivss.
Myrrhæ, ʒvj.
Aloes extracti, ʒvj.
Vini Albi (*Sherry, Anglicæ*), f. ʒxxiv.

Macera per dies septem et cola.

The dose is from one fluid dram to half a fluid ounce.

Vinum Veratri.—This preparation has fallen into disuse and should be removed to make room for the *vinum colchicum*, the best method of preparing which is the following, the formula introduced into Guy's Hospital by the late Dr. Marcet. The London College would be manifestly disrespectful to the memory of one of the most eminent members, by introducing it into the London Pharmacopoeia.

Vinum Colchici.

Take of the recent bulb of the *Colchicum* (raised in August), sliced and bruised, twenty-six ounces.

Sherry Wine, twenty-four ounces.

Rectified Spirit, two ounces (fluid). Agitate the mixture a-day for seven days, and then filter through paper for use.

N.B. — I have given an accurate translation of the prescription that no mistake may occur in making the above preparation, and consider of great importance to avoid.

SYRUPS.

Syrupus Althææ.—This syrup very soon suffers from spontaneous decomposition, and what other medicinal purpose can it answer than simple syrup?

Syrupus Aurantiorum.—This syrup contains the pleasant flavour of the orange peel. Mr. Thomson says, "An equally agreeable and efficacious may be made by adding one ounce of tincture of orange peel to a pint of simple syrup."

Syrupus Limonum et S. Mori are agreeable syrups for acidulating decoction of barley and other drinks in febrile diseases, and the latter also has the advantage of its colour.

Syrupus Papaveris.—It is much to be censured that in making this preparation, the directions of the College are seldom attended to, as, when properly prepared, this syrup is a very useful anodyne; but in consequence of the trouble required in making it, it is seldom found genuine in the shops. The subjoined is a formula employed by a very respectable druggist; and if particular care is taken to obtain the extract of poppies genuine, he assures me it answers every purpose of the former, and does not so quickly run into a state of fermentation.

R Extracti Papaveris veri (in vacuo præp.), ʒj.
Aque Distillatæ Ferventis, Oj.
Sacchari Purificati, ℥ijss.

Dissolve the extract of poppies in the boiling distilled water, and let it stand by for twelve hours, that the feculencies may subside; then pour off the clear liquor, and add the sugar in the manner directed for simple syrup.

Syrupus Sennæ.—This syrup appears to be intended for children; but the simple infusion of senna, sweetened with sugar and with the addition of a little milk, given in the form of tea, is more willingly taken by them, and operates with greater certainty.

Syrupus Tolutani.—This syrup imparts an agreeable flavour to some medicines; but an intelligent commentator on the London Pharmacopœia asks, "If this quality is owing to the benzoic acid of the balsam, why not direct it to be made with a proportion of benzoic acid, instead of boiling an ounce of balsam of Tolu in water, which will only impart to it a few grains?" Many druggists are in the habit of making this syrup according to the subjoined formula:—

R Syrupi Simplicis, Oj.
Tincturæ Balsami Tolutani, ʒj.

The simple syrup is to be *heated*, and before it becomes quite cold, the tincture is to be *very gradually* added, frequently stirring it.

It was for the purpose of making this syrup that I proposed an officinal formula for the tinctura balsami tolutani.

Syrupus Zingiberis is an useful adjunct to carminative mixtures.*

CONFECTIONS.

Confectio Rosæ Caninæ.—The name given to this confec-

* Vide Mistura Rhodii in the Appendix.

tion is incorrect, as it is not a co of the recent fruit called hips. It to *confectio fructus rosæ canin London Pharmacopœia Londine cynosbati.*

Confectio Rutæ.—As this co prescribed, it is scarcely to be intention of the College in introd known, it would be very desira directions for using it, or have i macopœia.

POWDER

As these preparations are gene light, all powders should be ord kept in opaque or green glass b the Dublin College strictly attend

Pulvis Aloes Compositus.—Bot this powder are ill adapted for s which is seldom ordered by judic a very inelegant and nauseous m many convenient substitutes), it the Pharmacopœia.

Pulvis Ipecacuanhæ Compositus
The ipecacuan and opium are re cious medicine by the addition of the combination of sulphate of London College. The following trial, deserving preference to any

R Ipecacuanhæ Radicis con
Opii Crudi contriti, gr. xl
Potassæ Nitratis, 3viij. et
Tere simul, et fiat pulvis.

A scruple of this powder contains c two grains of ipecacuan, and sixteen g potass.

Mr. A. T. Thomson writes in tion, a formula for which he has third edition, p. 911, Appendix. duced a similar prescription in tl p. 395, formula 190. He intimate powerfully diaphoretic on account o making this alteration, it is rende original Dover's powder.*

Pulvis Kino Compositus.—If th

* Vide Pharmacologia, 1

venient to turn to the Pharmacologia, he will find it stated in several places that catechu, as an astringent, is to be preferred to kino, and to which opinion I can fully subscribe. Why not then substitute the former for the latter?

PILLS.

It has often been inquired, the composition as directed under this head being kept in the mass, would not the addition of the word *massa* be more appropriate than *pilulae* alone? viz. *massa pilularum aloes compositarum, massa pilularum aloes cum myrrha, &c.* "In dividing pill-masses, it is usual to add to them, and envelope them in, *magnesia*; where calomel is present, a *muriate of magnesia* is formed, and it is owing to this partial decomposition that the surface of the pill exhibits a greenish hue: *orris-root* ought *invariably* to be preferred to every other envelope, whenever mercurial and other metallic preparations enter into the composition."

Pilula Hydrargyri.—If *orris-root* powder be substituted for the liquorice in this preparation, the mass will be of a smoother and better consistence, and not so liable to become soft in damp weather, which is an objection that requires to be obviated.

Pilula Hydrargyri Submuriatis Composita (Syn. *Pilula Plummeri*).—The College formula is liable to the well-founded objection mentioned in the Pharmacologia, Vol. I. p. 336; besides, on being kept for some time, it becomes of so hard a consistence as to render it unfit for the formation of pills. The following, varied from the Pharm. Gen. Dispens. is in every respect preferable:—

R Hydrargyri Submuriatis, 3ss.
Antimonii Sulphureti præcipitati, 3j.
Guaiaci Gummi Resinæ contritæ, 3ij.
Saponis, 3ss.
Olei Juniperi, g^{ss}. xxx.
Theriac. Purificati* q. s. ut fiat *massa*, in pilulas sexaginta dividenda.

Every ingredient in this mass is judiciously proportioned. Each pill contains half a grain of *calomel*, which is as much

* *Molasses*, or *treacle*, is peculiarly useful in the formation of pill-masses for its preservative qualities. Dr. Paris informs us, that treacle is the best constituent that can be selected for the purpose of forming vegetable powders into pills, for it undergoes no decomposition by time, but maintains a proper consistency, and preserves the sensible qualities of the plant quite unimpaired for many years. He says, "From experiments, which I have repeated with some care, I am enabled to state, that the peculiar flavour of this liquid is entirely removed by a simple process, which consists in diluting it

as many systems will be able to bowels—an effect that ought to produce the appropriate infl system.

Pilulæ Saponis cum Opio.—Th to the College formula is liable to pieces on being rolled out. Th the intention of such a pill, and ferred on an unprejudiced compa propriety of naming it

Massa Pilularum

R Opii *crudi* in pulv. subtil
Extracti Hyosciami, ʒjss
Saponis Duri,
Iridis Flor. pulv. āā ʒj.

Contunde, ut fiat massa, in pilulas

N.B. — Ten grains of the mass con of the *extract of henbane*. The orris stated under the head *pilulæ hyd* Appendix to the *Materia Medica*. will exclude the appearance of opit from the aversion of some patients to

Pilula Scilla Composita.—Th admitted into the College formul of the least use, as only *two* grains mass, more of which is seldom gi consider that the following is m every ingredient acts in unison wit medicine is usually prescribed, and

R Scillæ Radicis pulveris,
Zingiberis Radicis pulver
Ipecacuanhæ Radicis pu
Saponis Duri, ʒjss.
Olei Juniperi, gʳ. xxx.

Contunde, ut fiat massa, in pilula

ANIMAL PREPA

Cornu Ustum.—*Testæ Præpar* these preparations in Thomson's pp. 554, 555. For the judicious re might well be spared from the list

with an equal weight of water, and part of powdered charcoal for half an strained and reduced by gentle evapc This is what I mean by purified tre every dispensary for the formation of

CERATES.

In making cerates and ointments some precaution is necessary. Books commonly direct most of the ingredients to be melted together at the same time; this, however, is a very improper direction. That ingredient which melts with most difficulty should first be melted alone, then the next most difficult should be added, and so on, and lastly the oil. Thus, in making the *ceratum resinæ*, the resin is first to be melted, then the wax, and, lastly, the oil is to be added. So also, in the *unguentum picis liquidæ*, the mutton suet should first be melted; and when the tar is added, no more heat should be used than is just sufficient to melt the tar.

Ceratum Plumbi Compositum. — The College cerate cannot be made of a good colour, nor the liquor plumbi acetatis combine well with the wax; it might therefore be usefully superseded by the following, which, of course, should be placed in the list of ointments, and named

Unguentum Plumbi Acetatis.

R Emplastri Plumbi, ʒvj.
Liquoris Plumbi Acetatis, f. ʒjss.
Olei Olivæ, f. ʒij.
Adipis, ʒvj.

Liqua simul emplastrum et adipem, dein sensim adde liquorem et oleum, ut fiat unguentum.

This is a neat and valuable preparation of lead, and renders every other form of the kind quite superfluous. The College would act judiciously in substituting it for the former inelegant cerate and the *ceratum plumbi superacetatis*.

OINTMENTS.

The pharmaceutical remarks under the head cerates will equally apply to these preparations.

Unguentum Hydrargyri Nitratis (vel Unguentum Citrinum).

— It has been very correctly observed that this compound, made according to the College formula, is much too hard to be termed an ointment, or for the uses for which it is employed in surgery. There have been a great variety of methods proposed by different persons for making this ointment; but after a careful trial and comparison, I think the following formula deserving the preference, if carefully prepared according to the directions: —

R Hydrargyri Purificati, ʒj.
Acidi Nitrici, ʒj. (*per pond.*)
Adipis, ʒiij.
Olei Olivæ, f. ʒvij.
Camphoræ (Sp. Rect.) pulv. ʒij.

First, dissolve the quicksilver in the camphor in the olive-oil, and whilst the of them with the prepared lard, previous concrete by being exposed to the air.

Remark. — The addition of the melted lard should be gradual, in a vessel, such as a basin, so as to exclude the action of a current of air, while the is formed with an ivory spatula, and the ointment be perfectly cold. When prepared in this manner, this ointment has a beauty of the consistence of butter, which is kept in closely-covered pots; but when made in a different manner, it becomes hard, brittle, and of a greenish marbled with green blotches.

Unguentum Sambuci. — “The ointment under this name is made by boiling the lard until they are crisp, and is of the name of the word *florum* should not, therefore, be in the College; for if a Physician adopts it, it is very probable that the ointment of the compounding of the prescription

Unguentum Sulphuris et Unguentum — These ointments are generally of a very disagreeable smell. It is thought that they should be cancelled, and the name of the and cleanly combination substituted. The formula is taken from Dr. Bateman's Diseases. It may very properly be called *anti-scabies*, which would be the unpleasant name of sulphur appears certainly, on many occasions, we find

R Potassæ Subcarbonatis, ʒi
Aqueæ Rosæ, f. ʒj.
Hydrargyri Sulphureti ru
Olei Bergamoti essentiali
Sulphuris Sublimati,
Adipis Præparati, aa ʒxj
Misce secundum artem et fiat Un

LINIMEN

Linimentum Æruginis — This preparation is improperly placed among the liniments. Its position shows that it belongs to the category of ointments, and should be placed amongst them in the list, and named *oxymel cupri subacet*

be given for preparing the subacetate of copper for medicinal purposes.

Linimentum Saponis Compositum.—It has been correctly noticed, that “if the solution of the soap be hastened by maceration in a sand-bath, as at present ordered, the liniment will coagulate on cooling, and will be too thick to keep in a bottle with a narrow mouth: retail chemists do not therefore employ heat in making this liniment.” The following is a much preferable and an economical formula; the latter consideration alone ought to induce the College to adopt it, or one of a similar kind, for the benefit of public hospitals and dispensaries, in which institutions economy in the making of various preparations is of great importance. See the remarks already made under *tinctura aloes comp. et tinct. cinchon. comp.*, which, if rendered less expensive, by rejecting all *superfluous* ingredients, will receive universal approbation.

Linimentum Saponis Compositum.

R Saponis Mollis, ʒxij.

Camphoræ in pulv. ʒjv.

Olei Origani (vel Rorismarini), f. ʒj.

Spiritus Tenuioris, Ojv.

Camphoram et oleum solve in spiritu, dein saponem adice, et leni calore digere donec liquetur.

ADDITIONAL REMARKS.

MATERIA MEDICA.

Bismuth.—The nitric acid dissolves bismuth with the greatest rapidity and violence; at the same time that much heat is extricated, and a large quantity of nitric oxyd escapes. The nitric solution of bismuth, when diluted with water, renders that fluid of a milky white, most of the metal falling down in the form of a *white oxyd*, called magistery of bismuth. This precipitation of the nitric solution, by the addition of water, is the criterion by which bismuth is distinguished from most other metals. For its valuable medicinal qualities, vide *Bismuthi Oxydum*.

Rhataniæ Radix (Syn. *Ratanguia*, *Rattania*, *Krameria triandria*).—This is the root of the *Krameria triandria*, a plant which is placed by some Botanists in the natural order Leguminosæ, and by others in the Polygalææ. It has been lately analysed by some chemists in Germany, where it enjoys a very considerable reputation.

According to *Trommsdorf*, who analysed this plant in 1820, the root consists of tannin, 42·5; gum, 17·5; matter analogous to ulmine,* and which may be extracted by means of potash, 25;

* Ulmine is a vegetable principle lately recognised by the Continental chemists as a constituent of some kinds of soil, of turf and

ligneous fibre, 15. The analysis of *Vogel* gave tannin, gum, 1.5; fecula, 0.5; ligneous fibre, 48; water and loss. Lastly, this astringent root was more recently examined by *Gmelin*, who found it to contain, tannin, 38.3; saccharine matter, 6.7; mucilage deprived of azote, and which may be extracted with warm water, 8.3; mucilage charged with azote, extracted by water, 2.5; ligneous fibre, with carbonate and sulphate of lime, silica, &c. 43.3; loss, 0.9.

It has been said by the Practitioner to whom the Profession is principally indebted for making it known in this country, that the root is known in Peru, from which it is imported, under the name *rhatania* and *rhatanguia*. "It seems evidently the root of a *Sida*, and, in external appearance, resembles the *rubia tinctorum* more nearly than any other substance with which we are acquainted. Though introduced but a few years in this country, it has been many years collected in the district of Lima for the use of Portuguese merchants, and employed by them for the purposes of improving colour, astringency, and richness of red wine. The part in which the medical qualities reside is of the size of a goose's quill, which is cut in the same manner as the madder root; the cortical part, in which its sensible qualities predominate, is very thick, breaks short, and is resinous. The ligneous part is tough and fibrous, and somewhat mucilaginous. *Sensible qualities*.—On being slightly masticated, the root discovers a very grateful astringency, which leaves a lasting impression on the palate, and is slightly aromatic and bitter, very productive of extractive matter. These qualities are imparted as well as its colouring matter, both to cold and boiling water, and to proof spirit. From the sensible qualities of this root, and its constituent principles, discovered by chemical investigation, its power as a tonic medicine, independent of any other proof, will stand every discerning Practitioner." And I am desirous of stating, that celebrated teacher of medicine in Guy's Hospital, the late James Curry, informed me that he found its tincture exceedingly efficacious in diarrhoea, and preferred it to catechu, as being a more agreeable astringent than any contained in the London Pharmacopœia. He also considered it very efficacious as a tonic: but, as many other valuable medicines, its virtues have not met with discriminative attention it deserves. See *infus. rhataniæ*, *tinct. rhataniæ*, *tinctura rhataniæ aromatica*.

OFFICINAL PREPARATIONS.

Acidum Aceticum.—In allusion to this article, I consider it of importance to make this additional remark, that there would be no propriety in the London College giving a formula for preparing

decayed vegetable substances, of bituminous wood, and of the bark of many trees. It appears to form during vegetable putrefaction, from the action of alkalies on the ligneous fibre: in this case it may be considered more as a product of the analysis than a constituent of the vegetable.

centrated acetic acid, not merely as the basis of the acidum aceticum dilutum, but also for its other valuable medical properties and uses. Mr. A. T. Thomson observes, "Acetic acid is stimulant and rube-facient. It is principally employed as a refreshing scent in syncope, asphyxia, and nervous headaches; and for obviating the unpleasant smell of the confined air of crowded assemblies and of the sick-room. It is also an excellent application to warts and corns, which it seldom fails to remove; but in applying it, care must be taken to avoid eroding the surrounding skin."

ALKALIES AND NEUTRAL SALTS.

Liquor Ammonia. — The process inserted in the first part of this paper is nearly similar to that mentioned by Mr. Phillips in his criticism on the London Pharmacopœia of 1809. The following error, however, occurred in transcribing the MS. for the printer: — instead of "distil off *eight* ounces," read "distil off *fifteen* ounces." Mr. Phillips, in his remarks on the editio altera of the Pharmacopœia, gives another formula for the process of obtaining the liquor ammoniæ, which is, in my opinion, preferable to the former, and to that ordered in the present edition of the Pharmacopœia. He recommends twelve oz. of muriate of ammonia, nine oz. of lime, and four pints of water, to be used, which will give twenty fluid ounces of liquor ammoniæ of a specific gravity of .954.

PREPARATIONS OF QUICKSILVER.

Hydrargyri Submuriæ. — In addition to what I have before observed respecting this preparation, I would remark, that if the College is still determined to adhere to a chemical nomenclature, the composition of calomel appears now to be, according to Dr. Ure, a protochloride of mercury, instead of a submuriate. He says, that "the following is the process used at Apothecaries' Hall, London: 50 lbs. of mercury are boiled with 70 lbs. of sulphuric acid to dryness in a cast-iron vessel; 62 lbs. of the dry salt are triturated with 40½ lbs. of mercury until the globules disappear, and 34 lbs. of common salt are then added. This mixture is submitted to heat in earthen vessels, and from 95 to 100 lbs. of calomel are the result. It is washed in large quantities of distilled water, after having been ground to a fine and impalpable powder."

Liquor Hydrargyri Oxymuriatis. — As there is no formula given by the London College for tinctura croci, which, indeed, may be considered as altogether superfluous, but as it imparts a beautiful colour, I would advise that xv. gr. of saffron be infused in f. ʒj. of proof spirit for a week, which being filtered, is to be added to the deuto-chloride of mercury, previously dissolved in the muriatic acid and distilled water.

INFUSIONS.

Infusum Quassia. — Infusion of quassia is a deadly poison to flies and other small insects, and I have reason to believe is equally destructive to the worms which infest the human intestines: I have

successfully prescribed it with that intention, combined with mucic acid, and have found it to prevent the generation of these and more than any other medicine. I commence by giving as a purgative, such as,

R Calomelanos, gr. v.
Extracti Jalapæ Resin. contriti,
Pulv. Radicis Rhei, ũā gr. x. M.
Ft. pulvis, primâ aurorâ in liquido spisso deglutendus.

R Quassie ligni rasi, ʒij.
Caryophyllorum contusorum, ʒij.
Aquæ Ferventis, Oss.
Macera per horas duas in vase levitèr clauso, et cola.

R Infusus Supraprescript. ʒvij.
Acidi Muriatici, gr. xl. ad ʒj.
Tincturæ Aurantii, ʒj. M.
Ft. mistura, cujus sumat partem 4tam nocte maneq. p. ventriculo.

This medicine is very beneficial when given alternately with liquor. ferri oxygenata, as recommended under that preparation.

CATAPLASMS.

Cataplasma Fermenti. — In making this cataplasm, *fine* oatmeal to be preferred to wheat flour, the latter being too adhesive. Several very useful additional cataplasms might be introduced into the Pharmacopœia. This must be left to the wisdom and discretion of the College.

I have now concluded my remarks on the London Pharmacopœia, and have endeavoured to condense and bring together many valuable opinions respecting the errors and omissions undeniably appertaining to it, and which so demand that attention which their respective merits entitle them to. I can take on myself to vouch for the *practicability* and *economy* of every process that has been recommended, and for their great practical utility. On a subject of so great universal importance, I have been particularly anxious to be guided by the sentiments of a venerable author, who says, "We ought not, like the spider, to spin a flimsy web with materials from our own materials; but, like the bee, visit every store and cull the most useful and the best." As far as I have done this, I hope my observations will meet with a liberal reception; and to those to whom the revision of the Pharmacopœia appertains, I would most respectfully say,

"Seize upon truth where'er 'tis found,
Among your friends, among your foes."

The improvement of the Pharmacopœia must be acknowledged.

■ ledged to be of great importance, both as respects the repu-
 ■ tation of the fellows of the College for scientific and medical
 ■ attainments, and as the work is constituted by high authority
 the standard by which Druggists, Apothecaries, and others,
 in this part of the kingdom, are guided in the exercise of
 their branches of the Profession: consequently the London
 College should consider it a duty incumbent on them—
 ■ a duty which is delegated to them by the Administration of
 the country, and which the Profession expects to see well
 performed—to bring out an improved edition of their *Phar-*
macopœia, as the progress of science shall require. There-
 ■ fore, in order to direct attention to the propriety of such a
 ■ measure, and to the necessity of improvement in this depart-
 ment of our science, I strenuously contend for the absolute
 necessity there was of concentrating and rendering conspi-
 cuous the valuable labours of those scientific men, who
 ■ have done so much in endeavouring to rectify its existing
 errors. Some persons, from a want of proper reflection, may
 say that the sentiments of those authors are already suffi-
 ■ ciently known. This assertion I totally deny as to its
 ■ general applicability. There certainly are some studious
 reading men in the Profession who are acquainted with what
 Dr. Paris, Mr. Thomson, and others, have written; but I
 am bold in maintaining that a majority, from want of inclina-
 tion, sufficient leisure, or from their local situation, are totally
 ■ unacquainted with what has been done by these eminent
 individuals for the improvement of pharmacology and thera-
 peutics.

It was therefore indispensable that their opinions should
 be collected and placed in the most prominent light, so that
 no excuse might be made for not attending to the remarks
 and suggestions of an humble individual, unsupported by
 such high and undoubted authorities. For the reasons I
 have stated, I cannot but consider that the value of my
 communication will in a great measure depend on the quo-
 tations I have made from those valuable works; which,
 although otherwise well known, their contents, in reference
 to the imperfections of the *Pharmacopœia*, have not been
 sufficiently attended to: and as there is now an opportunity
 of that being done, I would aspire to no greater utility than
 to that of having directed the attention of the Profession to
 what might otherwise have been lost in forgetfulness, or
 entirely overlooked.

tions already mentioned under
will contain the following *prepar*

ACIDS.

Acidum Hydro-cyanicum.
—— Nitro-muriaticum.
—— dilutum.
—— Sulphuricum Aromati-
cum.

INFUSIONS.

Infusus Conii.
—— Valerianæ.

MUCILAGES.

Mucilago Tragacanthæ.

MIXTURES.

Mistura Acidi Nitrici.
—— Muriatici.
—— Salina.

ÆTHERS.

Spiritus Æther. Muriat. *Olim*
—— Febrifug. Cluttoni.

CONFECTIONS.

Confectio Sennæ Composita.

POWDERS.

Pulvis Infantilis.

PILL-MASSSES.

Massa Pil. Aloes cum Ferro.
—— Capsici cum Rheo.
—— Colocynthis cum

Hydrargyro.

—— Elaterii.
—— Pil. Guaiaci Composita.
—— Sodæ Carbonatis cum Hy-
osciam.
—— Pil. Hydrarg. Nitrici Oxydi,
vulgo Pilula Rubra.
—— Hydrarg. Ozymuriatis.
—— Pil. Plumb. Superacet.
—— Stramonii.
—— Tonicæ.

PLASTERS.

Emplastrum Æruginis.
—— Thuris. P. L. 1787.

ERRATA.

Materia Medica.—For *mistura balsami tolutani*, read *tinctura balsami tolutani*.

Liquor Calcis Muriatis.—The liquor, after saturation ought to be filtered through colourless unsized blotting paper. A glass-ribbed funnel is the best that can be used for this purpose. The portion of liquid that passes through first must be refiltered, as it is seldom clear. These directions for filtration ought to be always attended to.

Liquor Ferri Oxygenati.—For *acidi nitrosi fortissimi*, read *acidi nitrici* (per pond.) $\frac{3}{32}$.

IV.

Cases of Deafness and Dumbness. By JOHN HARRISON CURTIS, Esq. Surgeon to the Royal Dispensary for Diseases of the Ear, &c.

I HAVE repeatedly observed the advantages that result from a professional character limiting his practice to one class of diseases chiefly; and daily experience convinces me more and more of the nice discrimination he thus acquires in the distinction of them, provided that his views be founded on a knowledge of the operations which take place in the animal economy, and that he take into consideration the nature of the various derangements in which these particular diseases originate, and with which they are frequently associated.

By Surgeons in general, no cases are more frequently given up in despair than those of deafness and dumbness. They are, generally, congenital, or the effect of acute disease, occurring at an early period of life. This latter cause of their origin should lead us more frequently to attempt the removal of them than is usually done, and should, at the same time, give us greater hopes of success from our attempts, than if the defect were one resulting from organic malformation; a cause which is much more unfrequent than is commonly supposed. Amongst the more recent cases which have come under my care, the following may be found interesting.

Case 1st.—George Hemmings, aged eighteen years, was admitted a patient at the Royal Dispensary for Diseases of the Ear, on the 2d of May last. This young man lost his hearing and speech at five years of age, in consequence of an attack of inflammatory fever. On examination, I did not perceive any organic defect, but, from the importunities of his friends, I was induced to give his case a fair trial. I began by dissolving the secretion, afterwards having the ears well syringed,—circumstances which, although apparently simple, are of more importance than is frequently supposed; I then had recourse to blisters behind the ears, which were kept open two months. In addition to these local means, a slight

course of alteratives was administered, to rectify some constitutional derangement, as indicated by the tongue and state of the primæ viæ. As there appeared a defect in the natural secretion, I introduced stimulant applications into the *mentis externus*, from which I found a visible alteration in the appearance of the secretion; and soon after, this was followed by his being sensible of the appulses of sound; and I am happy to state, that, after being deaf and dumb thirteen years, he is now able to hear and speak. The first word he uttered since his illness was 'mother,' which took place on the 21st of last April.

Case 2d.—Mary Ann Hague, aged four years and a half, lost her hearing and speech at two years old, from an inflammatory affection of the brain. By persevering in the treatment detailed in the preceding case for upwards of twelve months, she has also obtained hearing and speech.

Case 3d.—William Smith, a very interesting child, four years old, born deaf and dumb, was admitted a patient at the Dispensary May 22d, 1821. By pursuing the same treatment since his admission, as employed in the foregoing cases, he is now able to hear, and speak many words.

These cases will show that, however forlorn matters may appear, they should not be regarded as irremediable, under such circumstances, as is the usual practice.

Soho Square, 27th October, 1823.

PART II.

ANALYTICAL REVIEW.

Lectures on the Operative Surgery of the Eye; being the substance of that Part of the Author's Course of Lectures on the Principles and Practice of Surgery which relates to the Diseases of that Organ: published for the purpose of assisting in bringing the Management of these Complaints within the Principles which regulate the Practice of Surgery in general. By G. J. GUTHRIE, Deputy-Inspector of Hospitals during the Peninsular War, Surgeon to the Royal Westminster Infirmary for Diseases of the Eye, Consulting Surgeon to the Western Dispensary for the Diseases of Women and Children, Assistant-Surgeon to the Westminster Hospital, Lecturer on Surgery, &c. &c. &c. London, 1823. 8vo. Pp. xxvii. 623.

THIS work treats of those diseases of the eye and its appendages which require for their relief Surgical operations.

It therefore includes most of those affections which have been heretofore so tamely yielded by the Profession to the dominion of oculists, but which, it seems probable, will, ere long, be entirely restored to the management of men who have at least received a regular Surgical education. Three-fifths of the volume are devoted to the consideration of cataract, and the formation of artificial pupil: * as we do not purpose entering at this time upon either of these subjects, our labour in making known to our readers the character of the work will be much abridged.

Inversion of the Eyelids is the disease with which our author commences, and, after an examination of the merits and demerits of the several operations proposed for its relief by the older Surgeons, and those suggested and practised by Crampton, Saunders, and more recently by Jaeger† of Vienna, he proceeds to recommend one of his own contrivance, which seems to be more complete and effectual than any of them. It is an improvement upon the operation of Crampton.

As to the nature of the disease, Mr Guthrie conceives,

" 1. That the derangement of the eyelashes, constituting trichiasis; is frequently the consequence of disease, but seldom or never arises from unnatural formation, or from an accidental or too luxuriant growth of the cilia.

" 2. The relaxation of the integuments, or a partial paralysis of the levator palpebræ, in a natural or otherwise healthy state of the eye and eyelids, are not primarily concerned in the formation of entropium, and never alone give rise to it: although, if other derangement take

* The former of these subjects came fully before us on a former occasion. See the review of M. de la Garde on Cataract, in the *REPOSITORY*, Vol. XVIII. p. 66.

† We are surprised that Mr. Guthrie does not perceive any difference in the operation of Dr. Jaeger from that of Mr. Saunders, whilst in the descriptions and cases of its employment quoted by Mr. G. from a pamphlet of Dr. Hosp, which we have not seen, no distinct mention is made of removing the cartilage, but the operation is spoken of and described as an excision of the cilia, including their roots. To us it appears that Dr. Jaeger leaves the cartilage entire. Mr. Saunders removed it, on account of a vicious bending from its natural direction, to which he attributed much of the inconvenience occasioned by the disease. Whether, when the cilia have been excised, a bent condition of the cartilage would produce material inconvenience, it is not easy, without having had opportunities of seeing the effects of such an operation, to say; but as Mr. Saunders's operation was imperfect in its effects, so may we expect the more partial removal of the diseased parts to be insufficient. In Dr. J.'s method, indeed, the eye may be better protected by the lid after the operation, and this advantage may counterbalance the effect of the cartilage being bent.

place, they may (by removing some power of resistance to it) assist in its more complete formation.

" 3. That, in a general or complete inversion of the edge of the tarsus of the upper eyelid, the swelling of the external parts, and the spasmodic action of the orbicularis palpebrarum, first tend to the formation of the disease, and which is completely established by the contraction of the angles of the lids, and the accidental inversion of such hairs as become stiff and matted by the vitiated discharge from the meibomian glands and conjunctiva.

" 4. That the change in the curvature of the lid takes place principally from the contraction of the angles, whilst under the influence of the orbicularis, and not from the contraction of the conjunctiva corresponding to the superior broad ligament which supports the tarsus, and maintains the shape of the upper lid.

" These conclusions do not, of course, apply to such partial cases of trichiasis as result from the formation of a cicatrix, tumour, or other direct and obvious cause;" to which Mr. G. elsewhere alludes.

Without our undertaking to name the varieties and degrees in which this disease presents itself to the observation of the Surgeon, our readers will naturally conclude that the operation about to be described is intended for the relief of the more severe cases; whilst we may as well observe, that, amongst the remedies recommended by Mr. Guthrie for the more slight affections, are, first, the keeping plucked, as advised by Mr. Travers, any one or two hairs that may, independently of additional disease, irritate the globe of the eyes by growing in an irregular direction; and, in case of their tendency inward being too obstinate to be so overcome, the use of a pencil of caustic to the hair gland to effect its destruction: secondly, the application of strong sulphuric acid to a portion of the skin, "from three to four lines in width," near where the hairs are turned in, which is to be carefully wiped off after remaining ten seconds on the part, and the operation repeated at intervals, till the contracting effect of the cicatrizing process shall have changed the direction of the cilia, as first advised by Helling of Berlin, and now successfully practised and strongly recommended by Dr. Quadri of Naples. This latter application Mr. G. considers to be the most effectual substitute for the knife, when patients refuse to submit to the following operation, the account of which Mr. G. shall himself furnish.

The operation I recommend as equal to the cure of the worst cases, is to be performed in the following manner: The head being properly supported, the eyelids are to be gently separated; the patient is to be desired to refrain from making any effort whatsoever, and the Surgeon is to wait until he sees that the lids are perfectly quiescent. A small narrow knife, or one blade of a blunt-pointed scissors, is then to be in-

roduced close to the external angle, and a perpendicular incision made, of from a quarter to half an inch in extent, or of a sufficient length to render the eyelid quite free; the quiescent state of the lids, and especially of the orbicularis muscle, enabling the Surgeon to cut closer to the angle than he otherwise could do, and thus to divide the ligament, or at least the extremity of the cartilage. Another incision is to be made, in a similar way, at the inner angle; but this should not include the punctum lachrymale, as I have never found it necessary to do so; and, although the tears may continue to pass through the lateral canal into the sac, when the punctum has been included in the incision, they do not do so with equal freedom, and there is some observable deformity. The length to which the perpendicular incisions at both angles ought to extend, must now be decided upon by the appearance of the part; they must be continued, if necessary, by repeated touches with the scissors, until that part of the eyelid containing the tarsal cartilage is perfectly free, and is evidently not acted upon by the fibres of the orbicularis muscle which lie upon it. This frequently causes the incisions, and especially the internal one, to be longer than is usually supposed to be necessary. The part included in the incisions is now to be completely everted, and retained by the forefinger of the operator's left hand against the brow of the patient; when, if any lateral attachment be observed, acting upon, and drawing, or confining the lid, it is to be divided, which is, in fact, still elongating the incision. On letting the eyelid fall on the eye, the edge of the tarsus and the hairs will frequently appear in the natural situation, in consequence of the relaxation of the angles which bound them down; but, if the tarsal cartilage has become altered in its curvature, this will be immediately perceived; it will turn inwards at its ciliary edge, and be completely bent at its extremities, more especially at the inner one, where it is more powerfully acted upon by the musculus ciliaris. On desiring the patient to raise the lid, he readily attempts it, but the action of the levator, in such cases of vicious curvature, causes the cartilage partly to resume its situation: and, on examination, the curve will be observed to be so permanently vicious for about an eighth of an inch at each extremity, and especially at the inner, that it cannot be induced to resume its actual situation. When this is the case, the cartilage is to be divided exactly at the place where it is bent, in its length, and in a direction at a right angle with the perpendicular incision."

This enables the Surgeon to remove the altered curvature of the part. The sub-section of the conjunctiva to unite the perpendicular incisions, proposed by Mr. Crampton, is useless, and even injurious, according to Mr. Guthrie, who proceeds in his operation to cut away a fold of skin from that part of the eyelid included between the incisions. "Three or four ligatures," he directs, "are then to be introduced, and the divided parts from which the fold has been removed, are to be neatly brought together by the ligatures, each of which

ought to be twisted, and then fastened to the forehead by several short slips of sticking plaster."

The fold of skin should be taken as close as possible to the margin of the eyelids. Beer's forceps, to which the speculum used by Gibson for his artificial pupil forceps has been adapted, may be employed to include the fold which all the forceps or scissors may cut away.

"The ligatures," Mr. G. goes on to state, "should be inserted, first, at each angle; and when the vicious curvature is considerable, I not only pass it through the skin, but take that the *internal one* shall include, at its lower part, the *edge* of the margin of the eyelid," which, retaining that position longer than those held by skin only, tends to prevent relapse. The eyelid having been *completely everted*, is retained in that state by the means already named. Unotherwise than by granulation, is to be carefully prevented the use of cupri sulphas, and every necessary attention paid in the dressings. It is not always necessary to cut a fold of skin.

"The operation on the under eyelid is analogous to that on the upper, but is less severe, as the parts are more simple. It consists in inveterate cases, of a perpendicular incision made with the scissors at the outer angle, and carried downwards to such extent as will perfectly relieve the inversion. This incision, by dividing the fibres of the orbicularis at that part as well as the conjunctiva, renders the circular fibres powerless; and when it is properly made, the patient is incapable of moving the lid. One ligature is now to be inserted into the margin of the lid, and the threads fastened below the jaw by sticking plaster, so as to keep the eyelid everted."

This operation appears to be effectual in relieving very distressing instances of the disease, and its effects seem permanent.

We pass over the remarks on *relaxation* of the upper eyelid, in order to consider, in connexion with the disease already noticed, the opposite affection of the same parts, viz. *contracture of the eyelids*, a very unsightly disease, and productive of sufficient inconvenience to the patient, but one of far less serious effects than the disorder just considered. Mr. Guthrie speaks of four species, as distinguished by their causes.

"1. As depending on chronic inflammation, accompanied by traction of the skin, and of the integuments of the lid, but without any marked cicatrix.

"2. As depending on acute inflammation, or immediately following it, with relaxation, or swelling of the conjunctiva.

"3. As depending on the contraction occasioned by a cicatrix, the healing of a wound on, or in, the immediate vicinity of the eye.

"4. On paralysis."

The treatment of the disease depends upon the knowledge of its cause. In chronic inflammation of the edges of the eyelid, commencing in the meibomean glands, by degrees the skin becomes thickened, hardened, and contracted, the edge of the eyelid turns out, the conjunctiva is irritated, inflames, and swells, becomes thickened, but "not granulated," increasing and establishing the eversion. For this form of the disease, Mr. G. employs the following means of cure:—

In order to lessen the contraction of the skin, and reduce its thickness, he has the part regularly cleansed with warm water, wiped perfectly dry, and anointed with the unguentum zinci. The skin being contracted from irritation, and that produced chiefly by its being moistened with a discharge which sometimes encrusts upon the skin, at others produces chopping by evaporation, it is of the first importance to clean off the discharge which may lie upon the part, and then to protect the skin from the irritation of what may afterwards flow over it by a greasy application, which also contains the materials for healing any excoriation already occasioned. The outer skin being softened and relaxed by the natural subsidence of inflammation, on the removal of its cause, the next object to be effected is that of reducing the thickened conjunctiva, and inducing some contraction in that membrane, which will favour the restoration of the lid to its proper direction. For this purpose, the sulphuric acid is found by Mr. Guthrie to be a most effectual application, indeed so effectual, that in its use caution is necessary, lest, by continuing its application, the reverse of this affection, inversion, should be produced—an effect which has been occasioned. The acid is to be applied as follows.

"The lid having been previously cleansed, so as to prevent its slipping, the conjunctiva is to be gently wiped dry, and everted as much as possible, so as to show the part where it begins to be reflected over the eyeball. The upper eyelid ought to be a little raised by the finger of an assistant, and the patient should be desired to look upwards. The blunt end of a common silver probe is then to be dipped into some sulphuric acid, and rubbed with its side flat upon the conjunctiva, so that every part may be touched by the acid. The round point of the probe should be carried as far as where the reflection to the ball begins, but that part of the conjunctiva which covers it should be preserved inviolate. The punctum lachrymale, caruncle, and semilunar fold, are also to be avoided; but the external angle, as well as every other part, must be carefully rubbed. The effect of the acid will be observed by the conjunctiva turning white where it has been touched by it; and, in order to prevent the acid from affecting the eyeball, a stream of water should now be directed over the eyelid by an elastic gum syringe. If the acid should not appear to have turned the conjunctiva sufficiently white, it may be repeated with the same

precautions; and if the patient washes the eye afterwards in cold water, no inconvenience will result, the pain is comparatively trifling, very few persons complain of it. The application of the acid should be repeated every fourth day; and when applied in the manner directed, it does not cause a slough, but a general contraction of the lid, which is, however, only perceptible after two or three applications. Its effects in inverting the lid, which gradually begins to take place

By six or eight applications, the cure will be half accomplished, after which a longer interval may be allowed. Should ulceration from the application be not unfavourable to its operation. Some gently stimulating ointment is to be applied to the edges of the eyelid. This mode of proceeding is capable of occasioning inversion, of which Mr. G. has seen an instance.

After the eversion is cured, the disease of the edge of the eyelid claims a continuance of careful attention.

In the treatment of the second species of the disease, arising from acute inflammation of the conjunctiva, as inorrhæal or Egyptian ophthalmia, Mr. G. seems to prefer an operation the use of sulphuric acid, which ought to be repeated to every fourth day, aided by the daily application of sulphate of copper to the granular or fungous conjunctiva.

In the third species, however, which is caused by the contraction of a cicatrix on the healing of a wound in the vicinity of the eyelid, he employs an operation, of which the principal steps are suggested by an operation of Sir W. Adams.

Bordenave recommended the division of the cicatrix, the removal of a fold of conjunctiva. Beer is said to have considered the disease incurable. Professor Dzondi of Hildesheim divided the attachments of a cicatrix, and kept the wound open for two months, repeating the operation no less than three times before a cure was effected, in the instance of William Konig, a tanner. Mr. G.'s practice is, to make a single or double incision "from a little below the external to the internal angle of the eye, following the curve of the eyelid, of the orbit," cutting as far and as deep as may be sufficient for the removal of the cicatrix, and all cellular attachments to the bone. The adhesions are not merely to be divided but removed, lest they should reunite with greater firmness. The lid is to be raised, and every thread of cellular membrane which seems to draw it downwards divided. The cause of eversion being in this manner removed, *pro tempore*, the object to be desired is, a power of resistance with which to oppose the tendency in the future cicatrix to retract the lid. Here Mr. G. borrows, from an operation proposed by Sir W. Adams for the cure of another species of the disease, the hint of removing a triangular portion of the entire lid, in addition to such portions of conjunctiva as may appear to be

influence in continuing the eversion, and by the removal of which, and the consequent cicatrization, farther resistance to the return of the disease is afforded. The operation for the third species consists, therefore :—

“ First, in the removal of the adhesions which the cicatrix has formed to the cheek-bone, with the whole or such part of the cicatrix as can be with propriety taken away ; secondly, in the cutting out of an angular portion of the eyelid, near the external canthus ; thirdly, in the removal of the diseased fold of the conjunctiva (if there be any) by a horizontal stroke of the scissors, assisted by the forceps ; fourthly, in the application of two sutures, to bring the divided edges of the eyelid together ; one close to the margin of the lid, the other near the point of the angle below ; these are to be drawn just so tight as to bring the parts in close apposition, when they are to be cut off close to the knots, and supported by strips of sticking plaster ; fifthly, in the dressing of the wound made by the removal of the adhesions to the bottom with very fine lint, and applying a bandage over the whole.”

The threads are to be removed on the third day, and strips of plaster, with a compress, used to support the parts. Attention must be paid to secure the neat union of the wound. The wound made by dividing the old cicatrix is to be kept open by an ointment of equal parts of unguentum lyttæ, and ung. resin. flav. and not allowed to cicatrize until the granulations are upon a level with the skin. During the progress of the cure, support to the eyelid is necessary, and must be afforded by strips of plaster.

Two very interesting and successful cases of this operation are furnished to Mr. G. by Mr. Melin, an Assistant Staff-Surgeon, who seems to have performed the operations at Chatham in the year 1818. In the first there was no thickening of the conjunctiva. A portion near the outer angle of the eyelid was removed, and the divided parts united in three days, the wound made by the removal of the adhesions to the bone healing in one month, the cure being then very complete.

In the second, great difficulty was experienced in dividing the adhesions, which extended within the margin of the orbit, were very firm, and situated near the lachrymal sac. The triangular portion of the lid was taken from “ near its centre.” The operation was performed on the 9th of April, the wound of the tarsus had united on the 12th, and the cure is said to have been completed by the 10th of March, by which we presume the 10th of May must be meant. The cases are highly creditable to Mr. Melin.

Eversion of the upper lid is, for obvious reasons, a far more rare occurrence than of the lower. When it does occur, the remedial means are, for the most part, the same, and the ope-

ration of Mr. Guthrie for his third species has been necessary in a case which he relates.

The fourth species of this affection is only to be removed by the removal of the original disease, of which it is a symptom.

Mr. Guthrie is of opinion that *cohesion of the eyelids* does not occur as an effect of disease, but, in a case in which it is seen, is congenital; and that it is complete, an opening always existing at the inner angle into which a probe may be introduced. The constriction of the lids by secretions, to which they are subject, and by habitual motions, are obstacles to their agglutination when excoriated or ulcerated. The eyelids do, however, become adherent to the eye-ball in consequence of inflammation produced by the introduction within the lids of lime, and some other substances, which so greatly diminish the sensibility of the eye, that the patient will not blink; ulceration appears to take place, and portions of the conjunctiva of the lids and of the ball adhere. The cornea partakes but little of the adhesive state, and no difficulty is experienced in separating the partial adhesions of the lids to the lid, whilst it is next to impossible to destroy the adhesions between the two conjunctival surfaces. On this account Mr. G. is of opinion, that the vessels of the lid chiefly supply the materials of union.

When the adhesions between the conjunctiva palpebrarum and that part of the same membrane reflected upon the sclerotic coat of the eye, are broad, and continuous from the point of reflection, it is useless to attempt their destruction; indeed generally worse than useless. Narrow slips of membrane may be divided near the eye, and then cut at the lid, with good prospect of benefit. To prevent the cut surfaces should be touched with sulphate of zinc, and the eye rolled, and the lid moved frequently for a few days. Previously to determining upon any operation it is necessary to consider what is the state of the eye, and to be satisfied of the extent of the adhesions. If the operation may be repeated with some farther advantage.

Wounds of the Eyelids generally require the employment of one or more stitches, and these will retain the edges in contact, and prevent the effects of motion better than any other substitute. They should be assisted, however, by compression, and bandage. When the division is between the eyelid and the eye-ball, the eyelid should be supported against the edge of the eye-ball by pressure made with a compress and bandage, and

ligatures, used as recommended by Mr. Guthrie in his operation for inversion.

“ Wounds penetrating the upper eyelids in a horizontal direction may also injure the eyeball, and if the wound be deep, the eye will in all probability be lost; but if it be slight, cicatrization will take place, and a scar only remain, marking the situation of the injury. In such a case the elevation of the upper lid, necessary to bring the parts in perfect contact, will effectually prevent the coalition of the wounded portion of the lid with that of the eyeball; but if the wound should be in a perpendicular direction, that in the lid will remain opposed and in contact with the wound in the eyeball; and if passive motion be not early given to the lid, a union, or symblepharon, might be the consequence.”

Incurable amaurosis occasionally comes on during the healing of a wound of the forehead, in which the superciliary nerve has been injured; and Professor Beer, in recommending the complete division of the injured nerve, speaks very positively of the efficacy of such proceeding, when adopted at a proper period, in preventing this serious mischief. Mr. Guthrie has seen no successful instance of the employment of this operation.

On Tumours of the Eyelids. Hordeolum, or styte, is very well described by our author, and he particularly notices, that, when this little tumour suppurates, points, and its little yellow-pointed head breaks, only the *fluid* part of its contents escapes, the swelling not subsiding, because a slough of cellular membrane remains to be discharged, the disease being of the nature of “*furunculi*,” or boils; that there is a subsequent process of softening separation, and removal of the slough, which may be aided by pressure, and the part “*slowly heals*.” He also states, that “*the resolution of these tumours is seldom accomplished, and ought not to be attempted, where the inflammatory action is acute, for it never succeeds*.” Then, as if to be as inconsistent as possible, not ten lines farther on he says: “*The resolution of the more active tumours may be attempted by iced water, or vinegar and water, constantly applied, but which ought to be omitted if the pain be found to increase, and a small warm poultice substituted*.” “*The abscess should not be opened, but allowed to discharge itself by ulceration, and the poultice should be continued until the slough is discharged, and the hardness of the tumour has subsided*.” This latter direction is quite at variance with good surgery, and of a piece with the inconsistency just pointed out.

If the surgeon, we may state, as soon as he perceives that the little yellow head is formed on the top of the larger tumour, will pinch up between his left finger and thumb, a por-

tion of the skin of the eyelid, by which he may pull out the eyelid to a convenient distance from the eyeball to allow room, he may then draw the shoulder of a lancet across and through the tumour; after which, if it do not at once escape, either pressure, or a pair of dissecting forceps, will remove the little slough, and in twenty-four hours, frequently, there will be scarcely a vestige of the disease, all inconvenience which it occasioned having ceased from the hour of his using the lancet. Fomentation, and greasing the edges of the eyelids at night with some mild ointment, will serve to bring the meibomian glands to their natural state, and to allay any little irritation of the conjunctiva which may have been excited by the tumour.

In curing other little tumours which occur on the "edges of the eyelids, between the eyelashes, containing a whitish, fatty, or chalky matter, which," Mr. G. says, "should be touched with the point of a lancet, and their contents squeezed out," and on all similar occasions, we prefer the use of the shoulder of the same instrument, used as above described, because the point makes a timid patient start before the object is accomplished; but the side or shoulder has completed the intention in an instant. These are but trifling occasions for the exercise of surgical skill; but it is, therefore, doubly disgraceful when they are submitted to us, not to give the patient all the relief of which they admit, and in the readiest manner.

For the simpler kinds of tumours of the eyelids, when situated externally to the orbicularis muscle, an incision across them through the skin, and squeezing out their contents with the two thumb nails, is directed; when within that muscle, and having no "distinctive external characters," they "may be still removed in the same manner;" but if they adhere to the tarsal cartilage, the eyelid should be everted, when the projection of the tumour will be perceived through it, into which an incision is to be made, and the contents are to be pressed out in the same manner. "This method of removing tumours through an opening in the cartilage is never attended with any inconvenience, and ought always to be adopted when the appearance of the inside of the eyelid is changed from its natural colour to a semitransparent yellowishness, showing the firm attachment of the tumour to the cartilage, even if it do not indicate its partial removal by absorption."

When fluid contents of a sac have been discharged, the Surgeon is directed to introduce a probe, and move it about to excite inflammation; and to renew this proceeding daily for three or four days, that the sac may be obliterated. If the tumour be fleshy, it may be raised with a hook, and cut off with scissors. In the case where the contents of the sac

are brain-like, Mr. G. says, that the sac will require scarcely any subsequent treatment, but it is more necessary in this than in most descriptions of tumour, to remove the sac, "as the secretion is renewed rapidly. But when Mr. G. talks of carefully *dissecting out* the sacs of atheromatous tumours, he surprises us, as we are persuaded that only in cases where adhesions have taken place, this can be necessary. In at least a great proportion of these cases, if the divided edge of the sac, after the removal of its contents by pressure, be taken hold of with the dissecting forceps, the whole sac, or its halves in succession, may be peeled from the surrounding connections without difficulty. Yet we know, that in particular instances, it is necessary to dissect out these sacs, and Sir A. Cooper mentions an example in which it is so.

"The swelling of this description (atheromatous) which takes place at the outer canthus, is the most difficult of these tumours to remove. It passes within the orbit, and often advances to its periosteum, and the inner part of the cyst is with great difficulty reached in the operation."—*Cooper and Travers' Essays*, Part II. page 224.

Perhaps we interpret Mr. Guthrie in too general a sense, when we understand him to direct the dissecting out of these sacs, as commonly required.

These cases should not be treated by escharotics, for even if inflammation have attacked a tumour, and produced a partial discharge of its contents; though in another part caustic might soon complete the cure, yet in this it is well, unless the inflammation have already produced a considerable opening, still to use the knife or lancet to secure a neat cure.

The following is a very good description of the operation for *Pterygium*, including the after treatment:

"The patient being seated lower than the operator, ought to rest his head against the breast of an assistant, who elevates the upper eyelid, and fixes the eye with the fore and middle fingers of one hand, whilst he depresses the lower eyelid with the other. The Surgeon should then desire the patient to turn the eye outwards, if the pterygium arise from the inner canthus; and whilst it is thus on the stretch, take the opportunity of grasping it between the points of the forceps, about two lines from the cornea, and then raise it from the sclerotica, until he has room to pass an iris, or spear-pointed cataract knife, underneath it, and to the inside of the forceps, when it is to be cut through from within outwards. The extremity of the pterygium being still held by the forceps, will allow the operator to cut it off close to the cornea with the same knife, or by the curved scissors, which will be more easily effected, and more completely done. If any portion of the edge of the pterygium should have been left after this operation, it must be removed by the scissors, or it will keep up for several days the subsequent suppuration, and the eye should be washed with warm water until the bleeding ceases, when a compress and bandage should

be applied, so as to keep the eyelids closed, but not to press on the eye. The eyelids should be carefully washed clean night and morning; and oftener, if it be found agreeable to do so; but the eye should be kept closed to examine the wound, only so far as will show that the conjunctiva is not highly inflamed, or that chemosis has not taken place. On the fifth day the eye should be examined, when the divided surface of the sclerotica will be found covered with a yellow coloured deposit resembling mucus, whilst the surrounding edge of the conjunctiva is irregular, red, and inflamed."

This appearance contracts, and a new membrane is formed. Very little management is required but to remove excrescences should they arise.

A section of the work is allotted to "*the Removal of Extraneous Substances from the Eye,*" and "*Injuries of the Eyelids.*" The upper lid should always be everted, as the most sure means of removing substances lodged beneath it. For this purpose, the operation of eversion, which, till within these few years, was rarely, if ever, practised, is now found almost as useful as for discovering the state of diseased conjunctiva, for which it seems to have been first proposed. A few old Surgeons may still not know of the practice, or the most ready mode of effecting eversion. The Surgeon should draw down the lid by taking hold of a few of the cilia, and then place a probe across it, just above the upper edge of the cartilage, with which instrument he is to make gentle pressure, whilst by his hold upon the cilia he lifts outwards the lower edge of the eyelid. If the action of the orbicularis muscle be not strong, the lid becomes readily everted, and upon directing the patient to look downwards with his other eye, the conjunctiva of the upper half of the eye may be perfectly examined, and any foreign substance removed.

In whatever position it is desired to see an injured or diseased eye, the object will be most easily attained by desiring the patient to look with his sound eye at some point towards which you want the pupil of the affected one to be directed. Fear might deter him from moving the tender eye, if requested; but not knowing, or not remembering, that the motion of the two eyes corresponds, he has no apprehension of inconvenience from moving the sound one, and he readily changes its position at your pleasure, effecting, of course, at the same instant, the change you desire in the eye under examination.

When foreign substances stick in the cornea, it is necessary to remove them by the use of a "sharp cataract needle," the eye being properly steadied by the Surgeon and an assistant. It is sometimes required literally to dig them out, so tenaciously are they retained in the tough substance of the cornea. This may be done with very little or no ill consequence;

the worst being a slight opacity, provided it be done before inflammation and ulceration have been occasioned. "It is a waste of time," says our author, "to have recourse to poultices and narcotics, as some foreign authors have recommended." If an offending body, so large as to be likely to excite inflammation, be lodged behind the cornea, it may require an incision in the part for its removal, which, under some circumstances may with great propriety be made, and will be the means of preventing an inflammation which might be destructive or highly injurious to the organ.

In all cases of injury to the eye or its appendages, inflammation is the evil to be guarded against. Inflammation of the eye itself must be treated vigorously and perseveringly, and that of the neighbouring parts carefully watched whilst under management, lest the organ become affected. It is important to know that inflammation of the iris, arising from accidental injury, is as readily influenced by the mercurial treatment, as when its origin has been of a syphilitic or other constitutional character.

An interesting portion of this work treats of *Tumours within the Orbit*, and *Protrusion of the Eyeball*—of the *Extirpation of the Lachrymal Glands*—of *Alterations of Form in the anterior part of the Eye*—and of *Extirpation of the Eyeball* itself—followed by the two subjects *Cataract* and *Artificial Pupil*, which we have already noticed as occupying so great a proportion of the entire publication.

Some parts of the work are creditable to its author for the ingenuity and originality of his suggestions for improving the operative Surgery of the eye; and the whole bespeaks great industry in the pursuit of his inquiries into the opinions and practices of his predecessors and contemporaries who have especially directed their attention to this interesting and important branch of practice. But the more we see of works upon this subject, the more do we regret the untimely death and irreparable loss of our amiable, intelligent, and enterprising countryman, Cunningham Saunders. No writer whose works we have ever perused, has succeeded in imparting to surgical subjects an interest so vivid, as the accurate methodical descriptions of Mr. Saunders attach to the few subjects on which his pen has furnished the observations and suggestions of his penetrating mind.

In the work before us particularly, there is a want of that orderly, methodical, and complete manner of treating any of the topics which, in lectures, or in an *ex professo* treatise on any subject, seems to us more desirable than the heaping together of unconnected observations, however material these observations may be, towards forming the well-digested production

which we look for from a writer who is also a public teacher. Lectures are generally a compilation interspersed with original remarks and suggestions, but then the compilation should at least be neat. The writer of a treatise, or a lecturer on any subject, may and should, as a builder, bring from all parts the materials most suitable to his purpose; but these should be worked into form, and, in the structure which he erects, should appear only as contributing to the beauty and usefulness of a whole.

It is true Mr. Guthrie has commenced each of his subjects with an account of the synonyms of the disease in question, giving their derivation, and has proceeded through a sort of uniform course in disclosing the particulars of his subject, extracting freely from the writings of a great number of authors: but the whole of his work bears more the character of notes, original and selected, put together, and ordered to be printed, than of lectures written for annual delivery, and published after the revisals of six successive years. Yet are these lectures calculated to be very useful in diffusing still more widely than hitherto has been done, that spreading knowledge of ocular surgery which has, of late years, been expanding itself over the British empire and its dependencies; and however imperfect the manner of the writer, the matter of the book entitles it to a place on the shelves of every Surgeon.

PART III.

ANALYSIS OF FOREIGN PUBLICATIONS

IN THE DIFFERENT BRANCHES OF MEDICAL AND
SURGICAL SCIENCE AND LITERATURE.

Ueber die Verletzungen des Rückenmarkes in hinsicht auf ihr Lethalitäts—Verhältniss. Von Dr. JOH. LUDW. CASPER (aus Rust's Magazin für die gesammte Heilkunde besonders abgedruckt). Berlin, 1823.

On Injuries of the Spinal Marrow with reference to their relative degrees of Fatality. By Dr. JOH. LUDW. CASPER (reprinted from Rust's Magazine of Medicine). Berlin, 1823. 12mo. Pp. 78.

WE have been much gratified by the perusal of this little work. It is a small 12mo. of 78 pages, reprinted from Rust's Magazine, and affords a most excellent and comprehensive view of the various injuries of the spinal marrow, for the

purpose of determining their relative degree of danger. That this is not a work of supererogation, may be gathered from the author's most correct introductory observations. The disagreement of authors on any subject may generally be taken as a presumptive proof that the subject is not fully understood. If this position be true, what shall we think of our knowledge of the nature and effects of injuries of the spinal marrow? Hippocrates regarded wounds of this part as fatal; but as early as the period of Galen, a distinction was made, and the danger was considered to be much diminished if the wounds were inflicted in the lower portions of the cord. Still it was the prevailing opinion that wounds of the upper portion of the medulla were necessarily fatal: Manget, Bohn, and Albertis, express this opinion. Woyt and Teichmeyer regarded deep wounds in any part as fatal; but Boerhaave only considered such as affect the upper portion as deadly. Heister was the first who considered injuries of the spinal cord, even very near the head, as not necessarily fatal; and Haller and Arneman, from experiments on animals, deduced that such wounds were not "so absolutely fatal." More modern authors have returned to the old opinion, that the danger is in some ratio as the injury is inflicted nearer to the head. Ploucquet remarks, "*Si medulla spinalis prope cerebrum ubi vertebris colli continetur, quovis modo læditur vel premitur, sive per instrumentum lædens, sive per festucas à vertebris avulsas, sive per cruorem extravasatum, sive per luxatas vertebrae, mors subito et inevitabiliter sequi solet.*" Richter states decidedly, "Injuries of the spinal marrow, from wounds of the neck, are fatal." Metzger, Sikora, Müller, and Bene, are of the same opinion, and Wildberg agrees with them, but thinks that all injuries of the medulla will prove fatal sooner or later. Henke agrees with Wildberg. Boyer remarks, that when injuries do not prove fatal, their consequences often do. Many other French Surgeons do not regard these injuries as necessarily fatal. Marc agrees with Metzger. Fodéré considers even wounds in the neck as only "*généralement mortelles,*" and Ribes considers wounds of the inferior portion as not always fatal. So much disagreement amongst writers fully indicates the necessity of investigating the subjects, as it is of the highest importance to know what kind of injuries are really fatal, and when we may justly entertain hopes that science and art may rescue the sufferer from danger. To fulfil as nearly as may be this important object, is the design of the small treatise now before us; and it is but justice to Dr. Casper to say, that he has bestowed on it much learning and talent.

He divides his subject into injuries of the spinal marrow; 1st, from wounds; 2dly, from compression; 3dly, from concussion; and discusses each separately, adducing and collecting an amazing mass of opinions and of evidences, in the cases and dissections: and he offers the following the "summary result" of his labours:—

The following injuries of the spinal marrow are necessarily fatal:—

- a* Punctured wounds in the upper portion.
- Contused wounds in ditto.
- An entire division of the cord.
- Gun-shot wounds passing right across.
- b* True luxations of the vertebræ of the neck.
- True fractures of vertebræ of the neck.
- Effusions in the spinal canal.

The following injuries of the spinal marrow are necessarily fatal:—

- a* Punctured wounds in the lower portion.
- Contused wounds in the lower portion.
- b* True luxation of the vertebrae of the back or loin.
- True fracture of ditto.
- c* Concussion.

PART IV.

MEDICAL AND PHYSICAL INTELLIGENCE:

BRITISH AND FOREIGN.

I. *Some Account of the Life and Professional Character of MATTHEW BAILLIE, M.D. F.R.S. L. & E. &c.*

DR. BAILLIE was born October 27th, 1761, at Thos. Hamilton. He was the son of the Rev. James Baillie, D.D. Professor of Divinity in the University of Glasgow, and of Dorothea, daughter of Mr. John Hunter, of Kilbride, Lanarkshire, and sister of William and Mr. John Hunter. He had an elder brother, who died very young, and two sisters, who survive him—Mrs. Agnes and Mrs. Joanna Baillie.

Dr. Baillie entered upon his collegiate education, in the year 1774, at Glasgow, whence he removed, in 1779, by the advice of his uncle, Dr. William Hunter, to Baliol College, Oxford, in order that he might be enabled, by graduating at an English University, to enter on the exercise of the medical profession in London with every adventitious requisite to future eminence.

kept the terms required for the degree of Doctor of Medicine at this College; but nearly the whole of that period was occupied in prosecuting his medical studies in London. These he commenced in 1780, chiefly under Dr. William Hunter and his brother.

He had the great advantage of residing in the house of Dr. Hunter; and very soon after he entered upon his anatomical studies, he commenced his assistance to this celebrated Anatomist by making preparations for his lectures and museum, and, subsequently, by conducting the dissections of the students, and giving the usual demonstrations.

How far the assiduity and talents of Dr. Baillie were valued by his uncle, of whom he was considered as the adopted son, may be inferred from the tenour of the will left by this eminent man. By it his museum devolved to Dr. Baillie, for the term of thirty years, under the direction of trustees, with eight thousand pounds, as a fund for the support and augmentation of the collection. Dr. Baillie was also left his residuary legatee.

After the death of Dr. William Hunter, which took place the 30th of March, 1783, Dr. Baillie became his successor in his anatomical lectures, having for his associate Mr. Cruickshanks, the assistant of his uncle. His first course of lectures was delivered in the winter 1784-5, and he continued to lecture jointly with this eminent Anatomist until 1799. During this period he made a collection of anatomical preparations, which he afterwards presented to the College of Physicians of London.

In the year 1787 he was elected Physician to St. George's Hospital. He became Doctor of Physic in 1789, and immediately afterwards a Fellow of the College of Physicians: he was also elected a Member of the Royal Society in the same year. He married, in 1791, the eldest daughter of Dr. Denman, whose character as an Accoucheur was then generally acknowledged and respected. This connexion proved to him both a source of happiness and of eminence.

In 1795 he published his work on Morbid Anatomy; and the engravings illustrating it began to appear, in fasciculi, in 1799. He relinquished his public duties as a lecturer in the same year, owing chiefly, it was understood, to the association in the lectureship being unpleasant to him. On the occasion of his taking leave of his pupils, several eminent individuals were present. The lecture, according to our information, was not very appropriate; and the concluding address, which consisted merely of a few plainly expressed sentences, contained nothing remarkable, excepting a somewhat pettish and uncalled-for allusion to the real cause of discontinuing his lectures. But although this address was neither neat nor eloquent, it possessed, in other respects, a quality more estimable than either the one or the other—it was honest, and, we believe, conveyed not a sentiment more than he felt. The esteem in which he was held by his pupils was honourably evinced by them on this occasion: they presented him with a piece of plate, with a Latin inscription, expressive of their gratitude. In the year 1800 he resigned the office of Physician

to St. George's Hospital, and devoted his attention chiefly to extension of his practice.

His private practice had become at this time very considerable and we believe unusually great for a Physician not yet in his fortieth year. It was not, however, so extensive as to have led to resignation of his public duties as an Hospital Physician and Lecturer, if other motives had not co-operated. Dr. Pitcairn had been obliged, by the state of his health, to leave London in 1807. Dr. Baillie, the most intimate friend of that Physician, succeeded to a considerable share of practice amongst the higher classes of society. To this the powerful influence of his father-in-law, Dr. Denham, greatly contributed, who at this time enjoyed the most extensive and most lucrative practice of any Accoucheur in London; and the introduction and warm recommendation of such a man as Dr. Denham, who restricted his practice chiefly to those diseases which lay within the sphere of his department, could not fail of being conducive to the future eminence of a young but rising Physician.

The death of Dr. Warren, to whom Dr. Baillie owed much during the life of that eminent Physician, was very conducive to the further extension of his practice, especially in the higher ranks of society, and it continued to extend still farther, until 1810, when he was appointed Physician to the late King.

Dr. Baillie now held the highest rank as a Practitioner; and we believe that no one who preceded him, possessing an equally extensive practice in the circles of fashion, was so frequently consulted by his professional brethren as he was. In a few years he found it necessary to restrict his practice chiefly to consultations, in which he continued to be much engaged until within a few months of his death.

His health had been declining for some time, and we believe he experienced an attack of the epidemic catarrh which was so prevalent in London during the preceding winter. From this he did not completely recover. His strength gradually sank until death, which took place on the 23d of September, 1823, at his seat, Duntisbourne House, near Cirencester, Gloucestershire, where he had retired a few months previously, having nearly completed the sixty-second year of his age. He left two children—a son and daughter.

Dr. Baillie made, by the upright discharge of his professional duties, a large fortune, which, however, might have been much larger if he had been desirous of accumulation. His personal effects amounted to under eighty thousand pounds, exclusive of his estates. He presented his museum to the College of Physicians in his life-time, and a sum of money for the purpose of keeping it in order; * and he bequeathed his medical library to the same learned body.

* At a meeting of the Royal College of Physicians, on the 23d of September, the following tribute of respect to the memory of Dr. Baillie was ordered to be inserted in the *College Annals*:—

“That our posterity may know the extent of its obligations to

In the view which we shall attempt to take of the professional character of Dr. Baillie, it is not our intention to write an eulogy; that is unnecessary: but briefly to exhibit, as far as we have the means, a fair estimate of his talents, acquirements, and medical ethics.

During his life-time he was a general object of eulogy, and even of flattery. Much of this proceeded, we are conscious, from a feeling of respect for his talents and virtues; but much also flowed from interested motives. Much eulogy was publicly bestowed, in hopes that it might be repaid.* Dr. Baillie, however, possessed too strict a principle of honour to repay praise where he did not believe it to be deserved.

The first point of view, in our opinion, in which a Physician's character ought to be viewed, is professional talent; for although many other points are requisite to secure the confidence of the public and of the Profession, this one, as on it chiefly depends the safety of the individuals which come under his care, is of the highest importance, and all other attainments ought to be rendered subservient to its advancement. The professional talents of Dr. Baillie were considerable, but they were limited almost exclusively to one department of medical science, namely, to pathology — a department which received its most splendid additions and illustrations from the labours of the Hunters, who may be considered its fathers in this country. It cannot, therefore, be a matter of surprise that a Physician who, at an early period of life, was almost exclusively engaged in the investigation of this branch of medical knowledge, under its chief promoters, and who lived with, and was adopted by, Dr. William Hunter, should have his attention chiefly devoted to the study of it.

This too exclusive devotion to one branch of medicine, at the commencement of his career, injured Dr. Baillie's practical reputation, which entirely rested on his pathological knowledge. This, however, was considerable even at an early period of his practice; but it certainly was not so great as was to be expected from his uncommon opportunities and advantages. In the exercise of his profession, especially during the years of his more matured experience, his views of the nature of a disease were generally correct, although seldom intimate, and not always precise; and when it was expressed, even in doubtful cases, his opinion was given in such a

benefactor whose death we deplore, be it recorded, that Dr. Baillie gave the whole of his most valuable collection of anatomical preparations to the College, and six hundred pounds for the preservation of the same: and this, too (after the example of the illustrious Harvey), in his life-time. His contemporaries need not an enumeration of his many virtues to account for their respectful attachment to him whilst he lived, or to justify the profound grief which they feel at his death. But to the rising generation of Physicians it may be useful to hold up, for an example, his remarkable simplicity of heart, his strict and clear integrity, his generosity, and that religious principle by which his conduct seemed always to be governed, as well calculated to secure to them the respect and good-will of their colleagues and the Profession at large, and the high estimation and confidence of the public."

* "Viro laudato laudari."

virtues, and calculated to fulfil opposite intention-
rience, however, advanced, this evil was, in a great
but he fell into one but one degree less, namely, into
was often inefficient from the want of a requisite
active remedies: Nature was too often allowed by
own course, when she might have been directed to
advantage.

For a Physician in his extensive practice, he was
forming his judgment of any case before him from
tion exclusively, and for guarding himself against
from the opinions suggested by others. When he
he observed him accurately, listened to him atten-
pointed questions, and formed his judgment from a com-
of his case. His practice, upon the whole, was such
what is commonly called theory: he was chiefly gu-
rience; and in his consultations he generally opposed
theoretical, and even to the rational, inferences of
met. To this he appeared to be led, in some measure
of his abilities. These were not of a kind which
seizing the nicer distinctions of diseased action, and
remoter causes and relations—a faculty indispensable
profound pathology and to philosophical inquiry.
this endowment, and from having made the last
diable changes which the animal textures undergo,
diate study, in preference to the laws and modifica-
vital operations evince—from having looked more
than to their causes—he must have been frequently
his own pathological and therapeutical speculation
he ventured beyond the beaten track of his experience
have observed a similar and even greater deficiency

inimical to the advancement of medical science. Besides, to appreciate facts in such a manner as to infer the presence of such strict resemblances only as actually do exist between those facts that appear similar, and which we wish to treat on similar principles; and to seize upon, and to estimate duly, the various points of difference between those in other respects alike; require a degree of knowledge of the laws which govern the animal economy, which the individual unpractised in physiological and pathological speculation can never acquire; but which, when acquired, leads, more than any thing besides, to the due appreciation of the causes and conditions of disease, and to the adoption of the best indications and means for their removal. To appreciate facts in medicine, we must have recourse to the profoundest and fullest exercise of the higher faculties of our nature—we must reason with precision and depth respecting them, and with a due reference to the causes in which they originate, to the various influences by which they are modified or changed, and to the consequences to which they lead under the various circumstances of their existence. Without such an exercise of our reasoning powers, experience is often dangerous—it is only empiricism, which does not deserve to be dignified by being called rational.

Dr. Baillie's conduct to his Professional brethren was open, manly, and strictly honourable; he would not injure the reputation of any one, but would do much to promote the interests of those whom he considered truly deserving. It was to this liberal and strictly moral conduct, and to his reputed pathological knowledge, that he was entirely indebted for the esteem and eminence he obtained with the members of the Profession. He was punctual to engagements and appointments, and in all things he appeared to observe strictly the great moral precept, to do to others as he would be done to.

With his patients Dr. Baillie was simple, plain, and gentle. He acquired their confidence without any apparent endeavour; and he adapted the terms and manner of his discourse with them to circumstances, managing both so as to leave them calm, encouraged, and satisfied. He never saw a patient without examining fully into the nature of his ailments; and the opinion which he afterwards gave to the friends, was explicit, brief, and frank, and generally well adapted to the circumstances under which he gave it.

With respect to the rank in which we should estimate the writings of Dr. Baillie, it may be expected from us to say something. They added no facts to the branch of science to which they relate. But no modern production has tended more to diffuse a general knowledge of pathology amongst the lower ranks of the Profession than his work on *Morbid Anatomy*. The chief merit of that production is, that it contains a digested and clear account of the last changes produced by disease on the texture of the body; and although it is more the result of personal investigation than of medical learning, yet it contains nothing more than may be found in the pages

of Bonnet, Morgagni, and Lieutaud. The work would certainly have been much improved had he been better acquainted with pathological writings which appeared on the Continent about the middle and end of the eighteenth century and the commencement of the present. As it is, however, it forms an useful manual; its merits cannot be more favourably mentioned, than by adding that it has been translated, with the addition of copious notes by the translators, into the German, French, and Italian languages.*

We are not a little surprised, that in the tribute that has been paid by the College of Physicians to the memory of Dr. Baillie no mention is made of his pathological attainments. It is ungrateful to the living, even if our limits could admit, to speculate on reason for the want of due respect to the memory of the dead from those who ought to be the first to pay it with partiality. The name of Dr. Baillie, even for professional science, notwithstanding the absence of such a tribute from the College as will appear the greatest that has honoured them for more than a century in the class of Fellows.

To sum up — the eminence of Dr. Baillie was the result of uncommonly fortunate position in which his destiny placed him in early life. It was afterwards promoted by his extensive and powerful connexion — by his extreme prudence and circumspection — and by his liberal and honourable conduct towards members of the Profession. He was not a man of genius even of great abilities; but he was a man of sense and of sound judgement; and although he did not actually advance medical science he contributed to disseminate more widely a knowledge of its various branches, and to elevate, by his example, the medical character.

JAMES COPLEY

Jermyn Street, 26th Nov. 1823.

* The other writings of Dr. Baillie are the following: —

In the Philosophical Transactions for the year 1788 and 1789: 1. "Account of a remarkable Transposition of the Viscera." — 2. "An Account of a particular Change of Structure in the Human Ovarium."

In the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge: 1. "On the Want of a Pericardium in the Human Body." — 2. "Of Uncommon Appearances of Disease in the Blood Vessels." — 3. "Of a remarkable Deviation from the Natural Structure of the Urinary Bladder and Organs of Generation of a Male." — 4. "Case of Emphysema not proceeding from local Injury." — 5. "An Account of a Case of Diabetes, with an Examination of the Appearances after Death." — 6. "An Account of a singular Disease in the great Intestines." — 7. "Account of the Case of a Man who had no Evacuation from the Bowels nearly Fifteen Weeks before his Death." — 8. "On the Embalming of Bodies." — 9. "An Account of several Persons in the same Family twice affected with Measles." — 10. "Additional Instances of Measles occurring twice in the same Person." — 11. "Three Cases of Inflammation of the Inner Membrane of the Larynx and Trachea, terminating in quick Death."

In the Medical Transactions published by the Royal College of Physicians.

II. *Some Account of the Life and Character of ANDREW NICOLL, M. D. Deputy Inspector of Hospitals, &c.* By A. T. THOMSON, Esq. F. L. S. &c. &c.

AMONG other losses which the Profession has lately sustained, is that of Dr. Andrew Nicoll, Deputy-Inspector of Hospitals, and Chief Medical Officer, on the coast of Africa, who died at Acra on the 27th of April last, on board of his Majesty's ship *Cyrene*.

Dr. Nicoll, although not very generally known to the Profession, yet had honourably distinguished himself abroad in the situations into which his destinies had thrown him, in a manner which would have raised him to a very high rank as a Physician, had he practised at home. But, independent of mere professional talent, it must ever be gratifying to the members of the healing art, to rank as one of its body an individual who had proved himself a benefactor of the human race, and worthy of having his name embalmed in the affections of his country. He was an exemplification of the remark, that many individuals are sent into our colonies whose activity, enterprise, and genius, contribute to bestow invaluable advantages upon these isolated portions of the empire, which are deeply felt by the mother country. How few, however, of those who have fallen sacrifices to an honourable sense of duty, have had their merits enrolled in the enviable annals of futurity; on the contrary, the great majority have sunk into premature graves, "unnoticed and unknown." To prevent such an act of injustice in the present instance, is the intention, however feeble the performance may be, of the following memoir.

Dr. Andrew Nicoll was the son of Mr. David Nicoll, a respectable farmer in the parish of Seggie, near St. Andrews, Fifeshire, in Scotland. He received the rudiments of his education in the parish where he was born, and completed his classical studies at the University of Edinburgh, where he entered himself a student of Humanity and of Medicine in 1807. Having completed his term of study, he graduated in 1810; and, almost immediately afterwards, was appointed Assistant-Surgeon to the 80th regiment, then acting on the Madras establishment, where he joined it in the following year. It was on this stage that Dr. Nicoll first displayed his professional talents. He instituted a set of experiments on tepid, warm, and hot baths, to determine the temperatures at which baths prove salutary or hurtful, either to the healthy, or to those labouring under disease in India; and, in conducting

1. "The Case of a Boy, seven years of age, who had Hydrocephalus, in whom the Bones of the Skull, once firmly united, were, in the progress of the Disease, separated to a considerable distance from each other."—2. "Of some uncommon Symptoms which occurred in a Case of Hydrocephalus Internus."—3. "Upon a strong Pulsation of the Aorta in the Epigastric Region."—4. "Upon a Case of Stricture of the Rectum, produced by a Spasmodic Contraction of the Internal and External Sphincter of the Anus."—5. "Some Observations respecting Green Jaundice."—6. "Some Observations upon Paraplegia in Adulthood."

leaving India, stating the regret of the members of the committee, individually and collectively, that one so well calculated to relieve the Indian diseases should be withdrawn from the field of his constant attention of Dr. Nicoll to the sufferings of the soldiers, led him to suggest many things to promote his countrymen, others, an excellent, cheap, portable vapour bath, which he found of the greatest utility in the treatment of cholera, a disease under which soldiers suffer severely, partly because they have returned home after a long residence in tropical climates.

Soon after his arrival in England, Dr. Nicoll remained in the 80th regiment, of which he had continued to be Surgeon, although the whole charge of the corps had been transferred to the ill health of the Surgeon. In leaving India, he received the benedictions of the privates, and the regret and good wishes of his brother officers, to whom his open, cheerful, gentlemanly deportment had greatly endeared him. He spent nearly a year officially unemployed after this, and he made up his time with acquiring a knowledge of Mineralogy and Natural History, in order to qualify himself for any office which he might be appointed. His talents and abilities had long remain unobserved by the discriminating eye of the Government. Dr. Gregor, the Director-General of the Army Medical Department, perceiving justly that his genius was well adapted to the service in Africa, and believing that he was prepared to overcome the harshness of the climate from his previous residence in India, appointed him, with the rank of Staff-Surgeon, to be Chief Medical Officer at Sierra Leone; where he arrived in December 1818.

The impulse which Dr. Nicoll's energy, activity and industry produced in the department over which he now presided, soon became conspicuous. The whole was placed under

were demanded. The junior medical officers, also, who had, previously, merely attended to their duty of visiting and prescribing for the sick, were roused to direct their minds to obtain an accurate knowledge of the topography of the places where they were stationed; to cultivate Mineralogy and Botany; to collect and preserve objects of Natural History, and to keep regular meteorological tables. The quarterly reports, which were required from each establishment on the coast, were embodied by Dr. Nicoll in general half-yearly reports, which, being sent home, have supplied a mass of information of the utmost importance to the health of our soldiers and sailors, who may be destined to serve on a coast so ungenial to the constitution of Englishmen as that of Africa. How well Dr. Nicoll fulfilled the expectations formed of him on being appointed to this station, may be conjectured from the fact, that he was honoured with the rank of Deputy-Inspector, a circumstance, when his previous rank is considered, almost unprecedented in the service. His merits were also made the subject of eulogy in a Report which was drawn up by Sir George Ralph Collier in 1820, and laid before the House of Commons. "Before I conclude," says Sir George, "my observations upon the improved state of Sierra Leone, it is justice only which disposes me to notice the indefatigable exertions of the chief of the medical department, Dr. Nicoll. No part of the establishment of this colony reflects more credit upon the heads of departments, or does more honour to the mother country, than the liberal manner in which this branch of public duty is supported in England, and conducted at Sierra Leone. And it is not merely in his professional duties that Dr. Nicoll shows his zeal for the public service. His unwearied researches as to the localities of the country, its capabilities and productions, as well as a close investigation into the causes of disease, and the best mode of treatment, make his life a most valuable one; and his death or removal would be an irreparable loss to the colony. Talent and science, industry and application, are in him conspicuously blended."

With this happy structure of mind and energetic disposition, Dr. Nicoll could not long remain a passive spectator of the public transactions connected with the colony of Sierra Leone, nor indifferent to the progress of civilization in Africa, and the welfare and amelioration of the distressed condition of her sable sons. "*Nihil humani à me alienum puto*," was the ruling principle of his life; and, having obtained a seat in the council of the government of Sierra Leone, he suggested such measures as have contributed largely towards rendering a station which formerly was not unjustly regarded as a mere place of banishment, and the certain grave of our countrymen, superior in many respects to the greater number of our colonies. He demonstrated its advantages as a wide field of interesting research in natural history; improved by his example the character of its limited society; and, by his statistical regulations, rendered the climate more salubrious, at least, under ordinary circumstances, assuredly less fatal to European life. But his exertions were not confined to Sierra Leone. He courted the confidence of every stranger who had visited, and of every native who had come from, the interior of Africa; and, had he

lived a few years longer, many of the the efforts of Europeans to penetrate would have vanished. "Wherever y who was on the spot a witness of the la any improvement, to any advancement if you observe a good road, a new bri Leone Gazette, a correct and full alm collection of specimens of the produ alone was the projector, the architect, loss of such a man is incalculable, ir if it impoverished him, threw a lustre livened to many a stranger the monot His society was the chief delight of the dered at that he was sought for by all died poor; but he was a public chara ing from munificence, if not to be inde among his faults."

The writer of this brief memoir of a deeply deplore, knew Dr. Nicoll before developed by the opportunities of exerc supplied, and knew well the value of great liveliness of disposition, and a n conversation was embellished by wit and p amiable, and modest, and endowed v which attract others to their possessor, them indissoluble. His discriminatic appreciation of merit in others correct ness of heart so conspicuous, that in m standard of excellence to those aroun in his habits, simple in his manners, s it may be readily conjectured from w powers were considerable, and he had pense in his hospitality which left him t only as the reward of his official labo death, he made a will, leaving his pape with a request that such of them as to the press. They have not yet all hoped that nothing will occur to prevetified.

Dr. Nicoll had suffered from repeate dence in Africa; but his last and fata liver. "He appeared, it seems, to hav ger," (writes the same gentleman who having witnessed his valuable labours;) his speedy recovery as soon as he shou however, had been long diseased; but Cape Coast with the Governor, he was on his cheeks, a restless irritability in h face, which indicated that all was not s ing medicine so soon as he should have

complaint to the want of that occupation and active life to which he was accustomed at Sierra Leone." The effect which his death produced on Sir Charles Maccarthy, and those associated with him in the government of the colony, is thus described. "The Governor and suite arrived here (*Saint Mary's on the Gambia*) a few days ago, in the Cyrene, from Cape Coast, without stopping at Sierra Leone. A gloom pervaded the whole party when it landed in the boats under discharges of artillery. I anticipated something wrong. There seemed to be a cold indifference in the shaking of hands among old friends; and when I had gone through that ceremonial, I thought some one was wanting, the party was incomplete: but my doubts were at an end, when Weatheril, aide-de-camp to Sir Charles, turning to me, said, 'We have lost poor Nicoll! all would have been well if he had been spared!' Sir Charles Maccarthy was deeply affected at his decease, and the more so as the danger was all along carefully concealed from him. Sir Charles has lost in Dr. Nicoll his right hand, his adviser, his confidential friend, his companion in all his toils and pleasures; and life here must appear a blank to him after so great a separation.

"Our departed friend kept up his spirits and his sociability even to the last moment of his life. He fell a sacrifice to his sense of duty: for if, instead of accompanying the Governor to Cape Coast, he had returned to England from Sierra Leone in November last, his life probably would have been spared for many years. So useful was he, however, to our worthy Governor, that it is not astonishing he should have persuaded him to remain on the coast; but our friend has just verified your prophecy, that he would stay until it was too late to return."

To sum up Dr. Nicoll's character, he was, as a man, simple, amiable, and constituted to adorn society; as a friend, sincere and unchangeable; as a physician, attentive, kind-hearted, acute in his perception of disease, and ready in devising means to defeat its influence; as a man of science, ardent, and possessing a mind of uncommon grasp; and as a philanthropist, noble-minded and disinterested in the highest degree. His friends, his country, will ever lament his compliancy of disposition in sacrificing himself to a feeling of propriety; yet it is consolatory to reflect, that the thought that he was in the line of his duty must have soothed the last moments of a life so devoted to the service of his country as that of Dr. Nicoll.

"Dulce et decorum est pro patria mori."

III. Case in which a Tumour was found within the Vena Porta.

By M. HONORÉ.

In our 118th Number, Mr. Ward recorded a case in which a tumour was found on dissection within the vena porta. A somewhat similar instance has been detailed in the *Académie Royale de Médecine* of Paris, at their sitting of the 9th of September last, by M. Honoré, and the morbid structure presented to the Academy. This tumour was developed in the substance of the parietes of this vessel, just before it entered the liver. Its size was that of a large nut: it projected entirely into the interior of the vein, and appeared to be developed immediately beneath the internal or serous tunic of the vessel: it offered all the characters of the adipose tissue.

The individual in whom it was found v of the stomach. There was no serous cavity, although the vena porta was tumour.

Pathologists have generally remarked or ever been found in the cellular texture the vascular parietes, whether arterial found in the cellular tissue, uniting the then only in the sub-mucous texture. A been mentioned by M. Andral; (see anatomy of the digestive canal in some now recorded by M. Honoré seems to (*Archives Génér. Sept. 1823.*)

IV. Case of Softening of the Anterior and Spinal Marrow. — By

M. Royer-Collard, at the August n Medicine of Paris, detailed the particul portion of the spinal marrow was exceed case had been in a state of mental a years this man continued in a state of remarkable. His lower extremities were minal members became more and more executing any kind of motion: they p unimpaired. The patient sank, in 1823 *Dissection*: the pia mater of the anter sented a yellowish colour: the corpora c the bundles constituting the anterior part and as soft as *bouillie*. The anterior r experienced a similar softening. The p and the posterior roots of the nerves, w thalami optici, and the corpora striata, degree than the marrow. — (*Rev. Méd.*

V. Case of Chronic Hydrocephalus

In one of the late Numbers of Hufela aged eighteen years, is detailed, who died had laboured during fifteen years. The d cranium almost completely ossified: it v situation of the fontanells. The circumf inches and a half; the antero-posterior d the transverse diameter eight and a l and three-fourths; the oblique diam fourths; and the whole length of the half. Between the brain and its mening lowish fluid were found. The brain it detected the usual anatomical dispositio the appearance of a kind of pulpy sac th nine ounces of a similar fluid.

The aqueous accumulation extended the complication of hydrocephalus with bral column was inspected, and the spins canal; above two ounces of fluid escap patient had sustained this disease for l standing, until the two last months of h menia were always regular, and even abu

VI. *Case of Intus-Susception, followed by the Evacuation, per anum, of about 30 inches of Small Intestine and a Portion of Mesentery.* By MM. BOUNIOL and RIGAL fils.

At a late meeting of the *Académie Royale de Médecine*, M. Larrey read a report, in his name, and in that of MM. Roux and Bécларd, on a case under the above title. The individual who was the subject of it had laboured under violent dyspepsia, after which he was attacked with every symptom announcing internal strangulation, such as complete suppression of the alvine evacuations, vomiting of faecal matter, hiccup, and severe pain of the abdomen, with an elevated tumour, very sensible to the touch, in the right iliac region. At the end of twelve days, after violent pain in the bowels, the portion of intestine above mentioned was evacuated per anum. From this time the patient rapidly improved, a painful sensation in the right iliac region being the only inconvenience remaining. At the end of about three months, this individual, after having eaten a large quantity of cherries, was attacked with symptoms of peritonitis, and died. Permission could not be obtained to open the body. The preparation sent to the *Académie* certainly resembled, in every respect, a portion of intestine and mesentery. M. Larrey supposes, what is indeed the only rational supposition, that a portion of intestine, invaginated, strangulated, and struck with gangrene, had become separated from the living tissues, and had entered into the great intestine, whence it had been evacuated. By a successful effort of nature, both ends of the living intestine, coming in contact, had reunited.—*Revue Médicale*, Août, 1823.

VII. *Efficacy of the Chloruret of Lime as a disinfecting Agent.*

Messrs. Orfila, Lesueur, Gerdy, and Hennelle, having been requested by the *Procureur du Roi* to examine the body of an individual who was supposed to have been poisoned, and who had been dead for nearly a month, found the smell so insupportable, that they were induced to try the application of the chloruret of lime, as recommended by M. Labarraque in the pamphlet to which we had occasion to refer in our last Number. A solution of this substance was frequently sprinkled over the body, and produced quite a marvellous effect; for scarcely had they made a few aspersions, when the unpleasant odour was instantly destroyed, and the operation could be proceeded in with comparative comfort.—*Archives Générales de Médecine*, Août, 1823.

VIII. *Vegetable Milk.*

Amongst the many interesting vegetable productions which are met with in the equinoctial regions, may be reckoned a tree which abundantly affords a milky juice, similar in its properties to the milk of animals, and is employed for the same purposes, as M. de Humboldt witnessed at the farm of Barbula, where he himself drank of this milky juice. This liquid is derived from the *palo de lucho*, or *de vacca*, a tree which grows somewhat abundantly in the mountains above Periquito, situated to the north-east of Maracay, a village to the west of Caracas. This milk possesses the same physical qualities as that of the cow, with this only difference, that it is a little viscous: it has the same taste also as cow's milk. With respect to its chemical properties, they sensibly differ from those of animal milk. The constituent parts of the milk of the *Arbre de la Vache* are—1st, wax; 2d, fibrine; 3d, a little sugar; 4th, a magnesian salt; and 5th, water. The presence, in vegetable milk, of a product which is not commonly met with, except in the secretions of animals, is a surprising fact, which we should not have announced without much circumspection, had not one of our most celebrated chemists, M. Vauquelin, already found animal fibrine in the milky juice of the *carica papaya*—(*Gazette de Santé*, Juillet, 1823.)

IX. On the Exhalation of Carbonic Acid during Respiration.

By Dr. EDWARDS.

This eminent physiologist has communicated to the French Institute the result of numerous experiments which he has made respecting the exhalation of carbonic acid during expiration. He proves that carbonic acid does not form instantaneously in the lungs through the action of the respired air, but that it is secreted from the blood in the respiratory organs. Dr. Edwards placed some cold-blooded animals in perfectly pure hydrogen. The respiration was kept up for several hours as in atmospheric air; and he discovered after this lapse of time, the presence of a quantity of carbonic acid, equal to that which would have been effected in atmospheric air.—*Revue Médicale*, Août, 1823.

X. On the Transmission of Contagious Principles from the Lower Animals to the Human Species. By Professor REMER, of Breslau.

One great question in pathology is to ascertain if Hydrophobia and Vaccinia are the only maladies which may be transmitted from the lower animals to man; or if a similar transmission may likewise take place in other diseases to which animals are subject; and in the latter case, what are these diseases? In order to solve this question, M. Remer adduces a number of facts, which prove, in a very conclusive manner, that certain other disorders, such as the virulent coryza of horses, the plica of animals covered with hair, the gangrenous inflammation of the spleen, which occurs in cows, &c. may, from immediate contact, be transmitted from the animal to the human species, and there give rise to diseases entirely resembling those which gave them origin.—*Archives Génér. Sept.* 1823.

XI. A new Remedy for excessive Salivation.

Dr. Kruger-Hausen, of Gostrow, has given an account of a man who, during a state of excessive salivation, attended with hæmorrhage from the gums, had employed the usual astringent gargles without benefit, who afterwards covered his tongue and inside of his mouth and fauces with tar, by means of a brush. He soon afterwards recovered, without any other remedy. Dr. K. has since employed the same means in several cases, with the effect of quickly removing this disagreeable consequence of medical treatment, without any inconvenience resulting from this new method.—*Rev. Méd.* Juillet, 1823.

XII. Lectures on Medical Jurisprudence. By J. GORDON SMITH, M.D.

We have been much surprised that, notwithstanding the great attention that has been devoted to Forensic Medicine by the best writers in our Profession, no regular course of lectures has been given on this branch of medicine for some time. We are happy to find that this desideratum is at length about to be supplied by Dr. Gordon Smith, to whom this department of medical science is chiefly indebted in this country. This able Physician intends to commence his course in the first week of January, 1824, and to continue it till the end of March.

Although the works on medical jurisprudence furnish the student with much information, yet no one who wishes to obtain a comprehensive knowledge of an important branch of professional practice would rest satisfied with that alone. The copious and practical details furnished by a full course of lectures are requisite to the obtaining a satisfactory stock of information in this, as well as in other departments of medicine. There is no school of medicine in Europe, except the London schools, where a proper provision is not made for this study; and we hope the British metropolis will be no longer an exception.

We are happy to understand that Dr. Smith intends not only to teach by precept, but to exemplify, by experiment and demonstration, the solution of

the many important problems which are usually referred by tribunals and the administration of a country to medical men. Such modes of instruction, we may venture to assert, will put the medical Practitioner at once in possession of a stock of knowledge equivalent, perhaps even superior, to experience.

MONTHLY MEDICAL BIBLIOGRAPHY.

BRITISH.

Chemical Recreations: a Series of amusing and instructive Experiments, which may be performed easily, safely, and at little expense; to which are prefixed, First Lines of Chemistry, wherein the principal Facts of the Science are familiarly explained; with a minute Description of a cheap and simple Apparatus; illustrated by Seventy engraved Figures of the different parts of it. 12mo. Pp. 228. Glasgow, Edinburgh, and London, 1823.

The title-page of this volume very happily expresses its nature and objects. It is inscribed to the members of the Mechanics' Institution of Glasgow, and, in our judgment, is eminently calculated to fulfil the purposes for which it has been composed. Simplicity of diction, perspicuity of arrangement, together with remarkable accuracy and comprehensiveness of description, form its characteristic traits. It is modest and meritorious: the early student will peruse it with advantage—the philosopher with approbation.

FOREIGN.

Nouvelles Démonstrations d'Accouchemens; avec des Planches en taille-douce, accompagnées d'un texte raisonné propre à en faciliter l'explication. Par J. P. Maygrier, D.M.P. &c. &c.

The three parts of this splendid work which have appeared deserve, in every respect, the fullest commendation. The plates are on copper, and are well executed and faithful to nature. The twelve plates contained in these *livraisons* furnish views of the pelvis in its healthy and distorted conditions, and of the anatomy of the external and internal parts concerned in the generative processes, &c. The work will be peculiarly interesting to the Accoucheur-Practitioner.

WORKS RECEIVED FOR REVIEW.

I. Observations illustrative of the History and Treatment of Chronic Debility; the prolific Source of Indigestion, Spasmodic Diseases, and various Nervous Affections. By William Shearman, M. D. Member of the Royal College of Physicians, London, &c. &c. London, 1824. T. and G. Underwood.

II. A Statement of the early Symptoms which lead to Water in the Brain; with Observations on the necessity of a watchful attention to them, and on the fatal consequences of their neglect. By G. T. Yeats, M.D. F.R.S. Fellow of the Royal College of Physicians, London, &c. &c. Second edition, enlarged. Phillips. 1823.

LITERARY INTELLIGENCE.

Mr. Purseglove, sen. has nearly ready for publication, "A Guide to Practical Farriery; containing Hints on the Diseases of Horses and Cattle, with many valuable and original Recipes, from the Practice of an eminent Veterinary Surgeon."

THE METEOROLOGICAL JOURNAL

From the 19th of OCTOBER, to the 20th of NOVEMBER.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50, High Holborn.

Oct.	Moon.	Rain Gauge.	Therm.			Barom.		De Luc's Hygrom.		Winds.		Atmos.		
			9 A. M.	Max.	Min.	9 A. M.	10 P. M.	9 A. M.	10 P. M.	9 A. M.	10 P. M.			
20		.57	55	57	50	29	85	30	00	87	84	ENE	ENE	Clo.
21			53	56	50	30	11	30	11	83	80	NE	NNE	Fair
22			52	58	50	30	05	29	90	75	75	ENE	NNE	
23			50	56	52	29	90	29	85	70	67	ENE	NNE	Fine
24			50	55	48	29	90	30	00	72	75	ENE	NE	
25			45	55	45	30	16	30	25	77	76	NE	N	
26	C		42	48	44	30	33	30	25	78	80	N	W	Fog.
27			45	46	45	30	14	30	00	81	87	W	WSW	
28			50	53	46	29	74	29	47	85	89	SSW	SE	Ovc.
29			49	52	44	29	55	29	55	80	85	WSW	SSW	Fine
30			42	45	44	29	24	29	04	90	90	NE	NNE	Rain
31		.97	41	44	39	28	93	29	25	91	90	NNW	N	Rain
1			40	42	34	29	60	29	82	87	85	NNW	NNW	Fair
2	C		39	43	33	30	00	30	00	84	87	NNW	NNW	Fine
3			38	43	45	29	90	29	75	85	88	WSW	SSW	Fog.
4			50	51	44	29	57	29	46	87	89	S	SE	Fine
5			45	51	45	29	56	29	60	90	90	E	ESE	Rain
6			51	52	49	29	80	29	79	90	89	E	ENE	Fog.
7			50	54	49	29	84	29	96	90	90	N	NNW	Rain
8		.73	51	51	40	30	30	30	30	84	80	ENE	ENE	Fine
9			42	50	39	30	38	30	46	70	67	E	NE	
10	D		41	41	28	30	47	30	40	65	67	E	ENE	Fog.
11			32	35	30	30	32	30	30	79	79	ENE	SE	
12			35	40	34	30	30	30	30	75	78	SE	SW	
13			37	39	35	30	17	30	17	80	84	SSW	SW	
14			34	37	34	30	14	30	10	80	80	SW	SW	
15			46	49	44	30	13	30	23	84	86	W	N	Ovc.
16			46	46	40	30	30	30	25	78	80	N	N	Fine
17			38	41	38	30	25	30	23	88	85	N	N	Mist.
18	●		40	49	37	30	30	30	27	80	78	N	E	
19			44	47	44	30	10	30	00	70	75	E	SW	Clo.

The quantity of Rain fallen in the month of October was n.

Notice to Correspondents.—Papers have been received from Dr. Mr. Iliff, Mr. Fosbrooke, and Mr. Sprague; also from Mr. Law, com by Dr. Birkbeck, and from Dr. Chisholm, Dr. Irvine, and Dr. Ba the hands of Dr. James Johnson.

M. O. must perceive the propriety of placing his name to his Comm Pharmacopoli is informed, that we have no knowledge whe edition of the London Pharmacopœia will be published.

Our Readers will perceive that we have been obliged to print a great part Number in a smaller type, and to give an additional quarter-sheet, in order to our esteemed Correspondents.

•• Communications are requested to be addressed (post Messrs. T. and G. UNDERWOOD, 32, Fleet Street

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THE TWENTIETH VOLUME.

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Plate of Mr. Morris's Straight Saw, opposite page 320.
Plate of Mr. Snell's Case of Cleft Palate, opposite page 366.

END OF THE TWENTIETH VOLUME.

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ERRATA IN VOL. XX.

- Page 86, line 38, *for* entirely, *read* however.
 83, line 13, *for* inflated, *read* filled.
 — line 35, *for* difference, *read* diffuence.
 — line 36, *for* from the exterior, *read* at the exterior.
 84, line 4, *for* reticulations, *read* filaments.
 — line 11 and 41, *for* cerebral, *read* cervical.
 — line 22, *for* too loose a, *read* a loose.
 — line 4 from the foot, *for* was without, *read* was not, without.
 85, line 5, *for* performs, *read* performed.
 — line 13, *for* incapable of sensibility, *read* capable of affording sens.
 150, line 27, *for* was, *read* were.
 276, footnote *, *for* Johanni, *read* Joannis.
 — footnote †, *for* Joannis, *read* Joannes.
 281, footnote †, *for* operum, *read* opera.
 282, line 10, *for* episthotonal, *read* opisthotonal.
 286, line 16, *for* Peterius, *read* Paterius.
 288, line 9, *for* hæmophthysical, *read* hæmoptysical.
 292, line 20, *for* atrine trunk, *read* urine trade.
 293, footnote *, *for* observations, *read* aberrations.
 297, line 22, *for* circumstance, *read* occurrence.
 298, line 20, *for* contendans, *read* contondans.
 300, line 9, *for* mental, *read* mortal.
 306, line 19, *for* on hair, *read* linen.
 306, line 3 from the foot, *for* is, *read* was.
 309, line 10 from the foot, *for* Sup. *read* Inf.
 406, line 6, *for* it is, *read* they are.
 433, line 13, *for* laminating, *read* lancinating.
 480, line 3 from the foot, *for* found, *read* formed.
 500, line 34, *delete* universal.





